BOOK II.

THE

NATURAL AND MORBID HISTORY

OF THE

MENTAL FACULTIES

(CONTINUED.)

AN INQUIRY

INTO THE

NATURE AND ORIGIN

OF

MENTAL DERANGEMENT.

COMPREHENDING

A CONCISE SYSTEM

OF THE

PHYSIOLOGY AND PATHOLOGY

OF THE

HUMAN MIND.

AND A

HISTORY OF THE PASSIONS AND THEIR EFFEC

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BOOK II.

CONTINUED.

CHAPTER VI.

ON IMAGINATION, AND ITS DISEASES.

The expression imagination, often applied to phenomena which are quite different from each other. Of reverie. Disproportion between the representative faculty of the mind and judgment. It may be either born with a person, or accidentally excited; the accidental exciting causes classed, and enumerated. The great danger of a natural disproportion between imagination and judgment pointed out, and explained. The accidental derangement of intellects which it occasions illustrated by cases.

THE word imagination has been indiscriminately applied to many phenomena, and

operations of the mind, which, although they reſemble each other in their general character, are very different in their real nature. The figures and phantoms of our dreams, the inchanting ſcenery and pictures we form when we build caſtles in the air, the repreſentations which occur in the deliria of fevers, and of inſanity, the ſudden intruſion of thought, which anger, jealouſy, fear, and other paſſions give birth to; all theſe are conſidered as the effects of one faculty; they are called illuſions of the imagination. But what is much worſe, and obviouſly wrong in a philoſophical light, is, that many active, voluntary, and complex operations of the underſtanding, are alſo called by the name of imagination: as, for inſtance, the genius of a painter, poet, ſculptor, or novel writer, &c.

It muſt be evident to any one who reflects even but ſlightly on the ſubject, that many of theſe mental phenomena are eſſentially different from each other, and ought therefore to be diſtinguiſhed by peculiar terms; but the poverty of language is ſuch, and the notions

which

which people form of them ſo inaccurate, that many obſtacles oppoſe themſelves to the accompliſhment of this very deſirable object.

The method of this work does not permit me to enter fully into this ſubject; but a ſhort analyſis becomes unavoidable, eſpecially as thoſe points of analogy in which the various kinds of imagination, as they are commonly called, happen to agree, muſt be rendered obvious in order to underſtand many things which are to follow.

It often happens when our attention is relaxed while engaged in any purſuits, that an image, or thought, wholly foreign to it, at leaſt as it appears to us at the time, ſhall preſent itſelf to our mind; for inſtance, in reading a book, or in the midſt of converſation, the image of an abſent friend, of ſome abſent ſcene, or ſome paſt action, or expected good, ſhall ſuddenly preſent itſelf in ſuch a manner as to arreſt our attention. Under ſuch circumſtances we often read on for a conſiderable time, but do not underſtand one word of the

book; and the voices of thoſe who converſe with us, reach the ears, and produce their full corporeal effect there, but the progreſs of the impreſſion is ſtopped by that already preſent in our mind. A perſon in ſuch a ſtate is ſaid to be in a dream, reverie, or abſent fit, &c.

However unconnected the ſubject of our reverie may be with that from which it originally ſprung, yet there can be no doubt that it came into the mind on the ſame principle as that on which all old thoughts ſucceed each other, I mean the principle of aſſociation. The intermediate ſteps are not always taken notice of, and hence it often appears a myſtery to the abſent perſon himſelf, how ſuch ideas ſhould have preſented themſelves. The truth of this aſſertion has been already proved in the chapter on Attention.

Almoſt every individual is ſubject to ſuch kinds of intruſion as this, for it rarely happens on the one hand that books, or converſation, or even the more neceſſary purſuits of our life,

are

are ſufficient to command unabated attention; and on the other hand, few people ſtrive to obtain that complete maſtery over attention which alone can prevent the wandering of the mind; but when attention is not forcibly directed to one object, or ſeries of thoughts, and any idea is preſented to the mind, with which ſeveral others are aſſociated, each leading to a different chain of ideas, the power of concatenation alone ſhall miſlead the mind, until ſome accidental circumſtances again bring back the attention to its former objects. In many people, partly from the original conformation of their mind, partly from neglect of education, attention is ſo little under control, that it cannot be ſtrongly directed to any one ſubject, except for a very ſhort time; the character of thoughtleſſneſs, ignorance, and volatility, which this occaſions, and its other baneful effects, have been already ſpoken of in the chapter on Attention.

As the ſubjects of waking dreams are as various as the notions which a perſon has ever acquired, ſo it is evident that the corporeal effects

of

of ſuch a ſtate of mind muſt be as various as human action itſelf, except in this reſpect, that they are either ſooner repreſſed, or ſooner interrupted by impreſſions of external objects. If an abſent perſon imagines himſelf engaged in controverſy, his lips move as if in converſation; if his ſubject of thought be an object of any paſſion, as anger, jealouſy, envy, hatred, or love, his countenance and geſtures betray the emotions natural to theſe paſſions.

Such kinds of imagination ſeldom produce any permanent miſchief, except when they occaſion an incurable habit of inattention, the bad effects of which have been fully conſidered.

Between the various acts of imagination alluded to in the beginning of this chapter, there is evidently one very great diſtinction to be made. They may with much propriety be divided into two great claſſes.

The firſt claſs is quite involuntary, the other, on the contrary, is ſo far voluntary, that the images which occur to the mind ariſe from the

the active employment of ſeveral faculties. The objects of our dreams, the various things which are ſeen in the delirium of fevers, and in inſanity, and the ſpectres which ſeem to preſent themſelves before the eyes of many young people, when left in the dark, and the viſions of ſome religious devotees, and believers in the immediate agency of ſpirits, all preſent themſelves involuntarily to the mind. But the images which HOMER, SPENSER, KLOPSTOCK, and SHAKESPEAR, give birth to, and which are called productions of the imagination, are the effects of a voluntary exerciſe of various mental faculties, and not to be attributed to any ſingle one to which the name of imagination ought to be excluſively applied. The proof of this will follow in the next chapter, in which genius is ſpoken of.

Whether the images ariſe involuntarily, or from the voluntary efforts of the mind, they are all to be conſidered as acts of the repreſentative faculty.

Now

Now it may be obferved that the reprefentative faculty of the mind is often difproportionately great in regard to the other faculties, efpecially to that of judgment. Such a cafe is to be confidered as highly dangerous, not only inafmuch as it is the fource of many errors in judgment, but alfo as it is a powerful *genitrix* of many permanent kinds of delirium.

A difproportionate activity of the reprefentative faculty of the mind may either be born with a perfon, or it may be accidentally excited.

In both cafes the images of the mind make a ftronger impreffion on the brain than that which the impreffions of external objects do, and this is the fole caufe why people believe in their reality. That this fuppofition is founded in truth is proved by a great number of facts, all of which tend to eftablifh this general axiom, that the belief in the reality of the phantoms of the imagination arife either in confequence of caufes which prevent the impreffions

preſſions of external objects from reaching the brain with a due degree of force, or elſe from the images of the imagination having acquired ſuch a degree of force from frequent repetitions, as to be ſuperior in their effect to thoſe derived *ab externo*. Many people, previous to the attack of delirium, if they ſhut their eyes ſo as to exclude the ſight of external objects, immediately ſee, as it were, a crowd of horrid faces, and monſters of various ſhapes, grinning at them, or darting forward at them. As ſoon as they open their eyes all theſe phantoms vaniſh; if they fall aſleep they are greatly diſturbed by theſe apparitions, and have horrid and fearful dreams. Every medical man of obſervation muſt have taken notice that, previous to the commencement of a delirium, the patient is often conſcious of its approach. Before the images of his imagination become ſo vivid as, by their action on the brain, to intirely obſtruct the paſſage of thoſe of external bodies, they only operate occaſionally, and the patient, therefore, being able to compare their influence with thoſe which ariſe from the people, and things around him, becomes con-

ſciou

ſcious of a difference between them. Thus patients when they firſt begin to rave, in fevers, only do ſo when the room is darkened, or when they ſhut their eyes: upon opening their eyes, or upon being allowed to ſee a good deal of light, the delirium goes off, and recollecting what things they ſaw, and their influence, they often remark, of their own accord, that they are ſure they were wandering, or raving.

It has been juſt now remarked, that a diſproportionate activity of the repreſentative faculty may ariſe from accidental cauſes. Theſe are various:

1ſt. Diſeaſed arterial action, as occaſioned by

a. Fevers, and other acute diſeaſes. (*See Inquiry into the Phyſical Cauſes of Delirium in* Book I.)

b. Common and ſpecific inflammation of the brain. (*ibid.*)

c. Intoxication. (*ibid.*)

d. Certain poiſons. (*See* No. 4. *in the Appendix.*)

2dly.

2dly. Caufes which counteract the impreffion of external bodies.

a. Difeafed vifcera, &c. (*See the chapter on Hypochondriafis,* Book I.)

b. Sleep.

3dly. Caufes which exalt imagination, and at the fame time deftroy judgment.

a. The faculty of fiction too frequently exercifed. (*To be difcuffed in the next chapter.*)

b. Strong paffions. (*See* Book III.)

A perfon born with a difproportion between the activity of his imagination and his judgment, has a peculiarity of mental character which is eafily to be difcovered in very early life, except a number of very happy circumftances have concurred to diminifh it.

Young people of this defcription are commonly endowed with great fenfibility of nerves, fo that every impreffion *ab externo*, is quickly

quickly and forcibly conveyed to the mind, and *vice verſa*, the images of the mind act quickly, and with great force, on the corporeal parts. All aſſociations of thought connected with any viſual object, or with paſſages of books, or ſubjects of converſation, are quickly brought into the mind; and hence there is a character of life, ſpirit, and cleverneſs in their converſation, which is not diſcovered in other young people. The livelineſs with which all impreſſions are felt does not allow time for the due exerciſe of judgment, and therefore they generally draw many erroneous concluſions concerning things which are eaſily ſeen in their right light by other people. They act with precipitation, and conſequently fall into many errors which a little foreſight (judgment as to future events,) might have prevented. Then they are all buſtle, confuſion, and folly, or all contrition and ſorrow, or elſe in actual deſpair; and th motives of theſe violent commotions of m d and bodily action, are never proportion- t o the effects.

Their

Their feelings are very acute; *pleaſure*, both corporeal and mental, generally throws them into exceſſive agitation, and bodily pain, if their frame be tender; and if they be very young, often excites convulſions. They are powerfully affected by all deſires and paſſions, and the moſt trifling cauſes of excitement, or depreſſion, overcome their judgment.

When ſuch people have once entered on the buſy ſcenes of life, and their judgment has not been ſtrengthened by a judicious mode of education, they are expoſed to inceſſant evils. They do not take the beaten path; they wander very eaſily into the region of poſſibilities; at times giving ear to the ſlighteſt inſpirations of hope; at other times ſo intirely depreſſed by ill-founded fears and terrors, that they may be ſaid to be on the brink of deſpair. A courteous ſmile, and a kind and civil behaviour, from one who has it in his power to ſerve them, makes them miſtake him for a patron. When they are diſappointed, hate and anger quickly follow; if they are often overcome by diſappointment, and do not ſu

ceed in the world, loud, general clamours, are pronounced againſt all mankind; the common rivalſhip of men is conſtrued into malice and perſecution, and except accidental favours of fortune remove the cauſes of their diſtreſs and diſappointment, miſanthropy follows.

Should a perſon, born with ſuch a diſproportion between his imaginary powers and judgment, have this faculty of his mind unfortunately exalted by a ſtore of images, which, from their nature deſtroy judgment, ſuch as horrid notions of ſupernatural agents, as of devils, ghoſts, hobgoblins, &c. as is but too frequently the caſe among young people, and alſo thoſe of the lower orders, the moſt melancholy effects reſult. It would be an eaſy matter to fill many pages with illuſtrations of this poſition, as the records of medicine are full of them. But one or two are ſufficient to explain what is meant. A Mr. CHARLES LENZ, a ſtudent of philoſophy, at the univerſity of Jena, relates the following from his perſonal knowledge of the fact.

" A young

"A young girl about nine or ten years old, "had ſpent her birth-day with ſeveral com-"panions of her own age, in all the gaiety of "youthful amuſement. Her parents were of "a rigorous devout ſect, and had filled the "child's head with a number of ſtrange and "horrid notions about the devil, hell, and "eternal damnation. In the evening, as ſhe "was retiring to reſt, the devil appeared to "her, and threatened to devour her; ſhe gave "a loud ſhriek, fled to the apartment where "her parents were, and fell down, apparently "dead, at their feet. A phyſician was called "in, and ſhe began to recover herſelf in a few "hours. She then related what had hap-"pened, adding that ſhe was ſure ſhe was to "be damned. This accident was immediately "followed by a ſevere and tedious nervous "complaint." *Pſychological Magazine*, Vol. IV. part I. p. 70.

Caſe 2d. "In Kleiſche, a ſmall village in "Germany, belonging to Mr. V. S. a maid-"ſervant of that gentleman's family was ſe "a ſhort league from home to buy ſome meat

"Sh

"She executed her orders correctly, and as "she was returning in the evening, she thought "she suddenly heard a great noise behind her, "like the noise of many waggons. Upon "turning round, she observed a little grey "man, not bigger than a child, who com-"manded her to go along with him. She did "not, however, return any answer, but con-"tinued to walk on. The little figure ac-"companied her, and frequently urged her to "go along with him. Upon reaching the "outer court of her master's residence, she "was met by the coachman, who asked her "where she had been, to which she returned a "very distinct answer. He did not remark "the little man, but she still continued to do "so. As she was passing the bridge, he sum-"moned her for the last time, and upon her "refusing to answer him, he told her, with a "menacing look, that she should be four days "blind and dumb, and having said so he dis-"appeared.

"The girl hastened to her apartment, and "threw herself on the bed, unable to open "her

"her eyes, or to pronounce a word. She ap-
"peared to underſtand all that was ſaid, but
"could not make any anſwer to the queſtions
"which were propoſed to her, except by ſigns.
"Every thing was tried for her recovery by
"the family with whom ſhe lived, but all was
"in vain. She was incapable of ſwallowing
"the medicines which were ordered for her.
"At laſt, on the expiration of the fourth day,
"ſhe aroſe in tolerably good health, and nar-
"rated what had happened to her." *Pſych. Mag.* Vol. II. part 2. p. 14.

In the Appendix ſeveral other caſes, ſomewhat analogous to theſe, will be found, and which are ſufficient to point out the nature of this ſingular illuſion. (See Appendix, No. 5.) It muſt occur to every perſon of reflection, that moſt of the idle ſtories concerning apparitions have no other foundation than that which has been pointed out in the two preceding caſes.

Theſe caſes have been brought forward to prove the exiſtence and influence which ſuch a vivid repreſentative faculty has in prediſ-

poſing to delirium. The cauſes which excite the delirium itſelf, commonly called in medical language, the occaſional cauſes, are exactly the ſame with thoſe which produce temporary illuſion. The permanency of the diſeaſe depends on the degree of prediſpoſition on the one hand, and the nature and force of the exciting or occaſional cauſes on the other.

It ought in candour and in juſtice to this peculiar conſtitution of mind to be remarked, that it does not neceſſarily follow that a diſproportion between the repreſentative faculty of the mind and judgment, ſhall inevitably lay the foundation for ſuch aberrations of intellect as have been juſt now deſcribed. Except there is, unfortunately, a family taint, it may be corrected, provided a judicious mode of education be adopted. The great art in ſuch caſes conſiſts in ſtrengthening judgment, and in exerciſing the memory in the correct enunciation of facts. It would lead me much out of my preſent track to dwell on this ſubject; beſides, it will be fully conſidered in the curative part.

CHAP-

CHAPTER VII.

ON GENIUS, AND THE MENTAL DISEASES TO WHICH IT IS MOST EXPOSED.

Genius analyzed, and the influence of the various faculties which conſtitute it obſerved. The general principle explained upon which repeated and exceſſive efforts of genius produce injury to the individual. When a man of genius ought to ſtop his ſtudies; the ſymptoms which announce danger mentioned. How it is to be accompliſhed. How want of ſleep ariſes from intenſe ſtudy. How bodily diſorders ariſe; caſes illuſtrative of this. How illuſions of the imagination are believed in; the natural laws of human thought determine us to believe in them when once they acquire a certain degree of vividneſs. Two caſes of ſingular illuſion mentioned. How the exertions of genius terminate in delirium. The particular kinds of ſtudy which are moſt apt to occaſion delirium ſtated. Various caſes brought

forward to illuſtrate the aberrations of mind to which genius is expoſed.

IN all acts of invention, we employ, firſt, abſtraction, to ſeparate individual notions, or parts of notions, from thoſe with which they were formerly aſſociated in our mind; and, ſecondly, we give them a new arrangement, ſo as to form a new *concrete*. Thus, in the repreſentation of a ſphynx, the poet and the painter abſtract, in idea, the head and the neck of a beautiful woman from the reſt of her form, and combine them, in their thoughts, with the body and tail of a lioneſs. They alſo abſtract from birds the wings and talons, and add theſe to the figure, and thus give birth to ſuch a monſter as nature never created, and which, in one point of view, might be conſidered as the offspring of pure fancy; but every part is originally borrowed from various objects of nature, and have been often ſeen, and in this reſpect, therefore, the production is to be conſidered as the effect of our experience.

We

We can modify the reprefentations of our mind in a great variety of ways, but it is always by means of acquired knowledge that we are enabled to do fo. We have feen very tall men, and alfo children, and very little men; it is, therefore, but extending, as it were, our experience, to imagine a human figure fo tall that its head might reach the clouds, or fo diminutive, that like one of SHAKESPEAR'S elves, it might creep into an acorn-cup. When the vivid thoughts of genius mount from earth to heaven, and fafhion angels after human fhape; when ornaments of gold and filver, rubies and diamonds, and many gems, are made to decorate the celeftial palace of Him who created millions of worlds; and the heated fancy of the poet relates the hiftory of battles fought againft the Almighty, in which the warlike inftruments employed were fimilar to thofe ufed by men; no other proof need be brought forward of the limits within which imagination is bound, or the ftorehoufe from which its images are borrowed.

In works of genius, not only abſtraction and combination, but judgment alſo, is abſolutely neceſſary. By means of this faculty we make a proper ſelection of the materials which the repreſentative faculty of the mind yields. The ſtream of ideas muſt be reſtrained leſt they break down the natural banks of reaſon; for if judgment be not conſtantly employed in compoſition, as much nonſenſe may be either ſpoken or written by a man of imagination, as is uttered by a perſon in the delirium of a fever. Genius, in the higheſt degree in which it can exiſt, is the reſult, then, of the combined influence of ſeveral faculties of the human mind.

Men of genius, or imagination, as they are often called, differ from each other according as one or other of theſe faculties predominates. If the repreſentative faculty overbalances the reſt, the work produced will abound in many new thoughts, and vaſt conceptions, but the acts of judgment will be few in compariſon.

It is ſaid of many productions of poetry and the fine arts, that they do not exhibit any

genius.

genius. A poem may be poetic as to the arrangement of language, the correctneſs of verſification, and even as to the figures which adorn it; the ſubject alſo may be truly poetic, but ſtill it may be devoid of true genius, for except it exhibits new combinations of thought, which, at the ſame time that they ſtrike us as being new, do not ſhock our judgment by their extravagance, but appear as the glowing emblems of probable exiſtences, or probable truths, there is no genius in ſuch a compoſition. Let it not be imagined that the plain diſcovery of truth is eſſential to genius; it is enough that it exhibits ſuch a novelty of thought as to awaken new trains of ideas in the minds of others, and, like the torch of Prometheus, animate men who were before inanimate.

When the imagination is ardent and creative, but counterbalanced by ſtrong and correct judgment, every thought which is great, and yet chaſte, may be expected. The neweſt, richeſt, and moſt unexpected combinations, ariſe copiouſly like the luxuriant produc

of a fertile ſoil, and being ſubmitted to the active and unerring care of reaſon, cannot fail to give general ſatisfaction, and become of general uſe. The moſt correct minds find a pleaſure in the ſtudy and contemplation of ſuch works; for, although many natural bodies are diſembodied, and faſhioned into a thouſand new ſhapes, and thoſe things which have no corporeal exiſtence, ſuch as faith, piety, and truth, vice, hatred and error, are preſented to us in various human forms, yet the action and language, and the character and qualities which are given them, are ſo appropriate, that moſt men often find themſelves under a momentary deluſion, as to the reality of the images. Even when the moſt fanciful ſubjects preſent themſelves to a poet, in whom an ardent and well-ſtored imagination is combined with a correct judgment, they will aſſume an appearance ſo natural, that though different from the object of our ſenſes, we ſeem as if we ſaw new ſights, heard new ſentiments, and were tranſported into new worlds and regions. This is the peculiar effect of true genius, and implies a won-

derful

derful union of extraordinary powers in the various faculties of the mind.

A procefs of the human mind, fo extremely complicated as this one is, muft neceffarily be greatly expofed to frequent diforder. As the phenomena of the diforders to which it is fubject are very remarkable, and have not been accurately examined, I find it neceffary to enter into a minute inveftigation of the mode of their production.

Although every part of the human body which acts, and which fuffers action, may be ftrengthened and improved by a due degree of exercife, yet we know from experience that when the exercife is continued too long, or is made to confift of a repetition of violent exertion, much mifchief and danger generally enfues; the texture of the part fuffers a confiderable though not an apparent change, and great diforder and debility follow.

This phyfiological obfervation applies equally to the brain as to every other part of our

our frame, whether we conſider it a part acting on the mind by means of impreſſions derived from external objects, or as acted on by the mind, as is the caſe in every effort of memory, judgment, imagination, paſſion, &c.

In the exerciſe of the body, as well as in that of the mind, it is impoſſible to fix any general ſtandard for all mankind, ſo intirely does this depend upon various circumſtances, ſuch as age, ſex, temperament, ſtate of bodily health and habit, &c. But there is a faithful monitor within us, in our own feelings, which ought to warn us when any exertion of the mental faculties is carried too far and ought to be diſcontinued. What I allude to is a ſenſe of bodily fatigue and wearineſs, which always follows long-continued and exceſſive attention; to which may be added feelings, which every perſon experiences on ſuch occaſions; a ſort of fullneſs, tenſion, and uneaſineſs about the forehead, often terminating in ſevere head-ach. This obſervation has not eſcaped the learned and ingenious Tissot. In his work on the health of men of learning, he ſays, "Quiconque

" Quiconque a penſé fortement une fois dans
" ſa vie, a fait cette experience ſur ſoi même,
" et il n'y a point d'homme de lettres qui ne
" ſoit ſorti pluſieurs fois de ſon cabinet avec
" un violent mal de tête, et beaucoup de cha-
" leur dans cette partie, ce qui depend de
" l'état de fatigue et d'echauffement dans
" lequel la möelle du cerveau ſe trouve."
Sur la Sante de Gens des Lettres, p. 145.

It is a melancholy truth, that in intenſe ſtudy ſuch corporeal feelings are ſeldom ſufficient to break the aſſociations with which the mind is occupied. Indeed, the idea of intenſe ſtudy naturally ſuppoſes an inſenſibility to every impreſſion, except ſuch as are connected with the preſent thoughts; and therefore it at firſt ſight ſeems as if an impoſſibility were required, when it is ſaid that ſtudy ought to be broken off when theſe corporeal feelings occur; but this depends on our never having connected any powerful idea with theſe feelings, ſuch, for inſtance, as there being the ſignal of much danger; were this the caſe, we ſhould find the operations of our mind intirely

tirely interrupted by it, as ſoon as the body began to ſuffer even in a ſmall degree.

The generality of men of ſtudy are not ſufficiently aware of the danger of long-protracted or violent exertions of the mental faculties, and therefore the corporeal effects which I have juſt now mentioned do not awaken any thoughts powerful enough to divert them from their purſuits ; or if they are powerful enough to interrupt the operations of the mind for a little, yet, through a miſtaken zeal, and, as if aſhamed of giving way to what they conſider an effect of indolence, they endeavour by a renewed effort of attention to regain the train of ideas which were interrupted.

As this work may probably fall into the hands of ſome in whom theſe dangerous habits of intenſe ſtudy have not yet produced much miſchief, and who may be unacquainted with the truth of the obſervations which have been juſt made, I ſhall take a curſory view of the

immediate bad effects of too intense application of mind, not only as the cause of many melancholy kinds of occasional delirium, but also as being often the source of downright insanity.

In every action of the mental faculties, the action of the arteries of the brain is increased, and a greater quantity of blood than usual is immediately transmitted to it; a kind of sanguineous congestion takes place in the vessels of the whole head, as is evident from the sense of fullness, giddiness, head-ach, a redness of the face and eyes, which are often felt upon any unusual exertion of mind by those who are not naturally strong, or who are weakened by indisposition; the irritability of the blood-vessels of the brain, therefore, are preternaturally stimulated, in the first place, by this increased quantity of blood, and a state of indirect debility of the brain follows. In the next place, as all mental perceptions, and their corresponding sensorial impressions become more vivid by repetition, and as all sensorial impressions capable of being trans-

mitted

mitted to the irritable parts of the body are to be confidered as ftimuli to thefe parts; and further, as all irritable parts alfo become more difpofed to action by repetition, and as action neceffarily exhaufts a great deal of the vital principle, we fee the reafon why all exertions of the mental faculties, when too long continued, or too violent, produce fatigue, and debilitate the corporeal part of the animal.

The bad effects of this corporeal affection are often exhibited in a very powerful manner on many of the vifcera effential to the healthy ftate of our frame. The force of the heart and arteries is diminifhed, and the various fecretions, therefore, are often leffened; the excretions are often retained longer than they ought to be, and, like ufelefs and foreign bodies, they irritate, and caufe diforder in the parts in which they are contained; refpiration becomes flower, and confined, the organs of digeftion are impaired, and digeftion and chylification are injured; hence a fenfe of languor, anxiety, dejection of mind, peevifhnefs, fpafmodic affections, and all the confe-

quences

quences of a debilitated fibre, and diſordered ſtate of nerves enſue.

The difference between the exerciſe of the body, and that of the mind, conſiſts in this; the former, although it alſo exhauſts the ſtrength of the muſcular fibre, and the energy of the nerves, yet proves the indirect cauſe of theſe principles being more quickly and perfectly reſtored than they otherwiſe would be, for, by ſupporting the activity of the heart, and arterial ſyſtem, they lay the ſource of a more quick and perfect ſupply of the various parts and principles which were waſted by fatigue. But the over-exerciſe of the mind weakens the body both *directly* and *indirectly*; directly, by exhauſting the principle of irritability, and the energy of the nerves; and indirectly, by allowing the heart and arterial ſyſtem, and the ſtomach and chylopoetic viſcera, to become debilitated for want of a due quantity of bodily exerciſe.

Another rich ſource of miſchief is the effects which the active employment of the powers of the

the mind, which confpire in the procefs in compofition, have on fome people, by diminifhing their natural quantity of fleep.

One would naturally fuppofe, from a knowledge of the laws of irritability, that when once bodily fatigue was induced to a certain degree, by corporeal exercife, or by exertion of the mind, fleep would naturally follow. But this only happens when the mind is but little or not at all engaged. After any ftrong and long-continued exertion of thought, imagination, or memory, &c. the affociations which have been excited ftill continue to act for a confiderable time after the voluntary efforts of attention have been given over; juft as when, after having fixed our eyes upon a ftrong light for a confiderable time, and then voluntarily excluding the external object, by fhutting them, the figure of impreffion ftill continues upon our retina, and keeps the mental perception awake. Every perfon who has been employed in any very active operation of the mind, and has continued it much beyond his ufual hour of fleep, muft have

found

found that it was impoſſible to prevent the aſſociation of ideas which had been excited from being renewed in his mind again and again for ſome hours afterwards, notwithſtanding every effort to break the chain of thought. The celebrated BOERHAAVE mentions, that having imprudently indulged himſelf in intenſe thought from morning till night, on a ſubject of a ſerious nature, he did not cloſe his eyes for ſix weeks after, during all which time he was perfectly indifferent to every thing. This ſtate was ſucceeded by univerſal pain, which he conſidered as a ſign of the animal ſpirits being renewed, and returning to their wonted channels, and diffuſing themſelves over his whole body.

In ZIMMERMAN'S celebrated work on Experience in Phyſic, there is a very remarkakle caſe mentioned, which exhibits the powerful and dangerous effects of intenſe ſtudy. As it is applicable to the preſent ſubject, I add a tranſlation of it. " A young gentleman, " a native of Switzerland, gave himſelf wholly " up to the intenſe ſtudy of metaphyſics. In

" a ſhort while he began to experience an
" inertneſs of mind, which he endeavoured to
" ſhake off by renewed efforts of application;
" this increaſed the complaint; and he re-
" doubled his exertions. This kind of con-
" teſt laſted ſix months, during which the
" diſeaſe increaſed ſo faſt, that both body and
" mind ſuffered from it. The health of the
" body was ſoon reſtored by proper remedies,
" but the mind and ſenſes became gradually
" more and more impaired, until they at laſt
" were ſubjugated by a complete ſtupor.
" Without being blind, he appeared not to
" ſee, without being deaf, he ſeemed not to
" hear; without being dumb, he did not
" ſpeak. In other reſpects he ſlept, drank,
" ate without reliſh, and without averſion,
" without aſking to eat, or without refuſing
" to do ſo. He was deemed incurable, and all
" remedies were laid aſide; this ſtate conti-
" nued a whole year. At the end of this time
" ſome one read a letter to him with a very
" loud voice, he was agitated, and emitted a
" murmuring complaint, and applied his hand
" to his ear; this was taken notice of, and
" the

" the perſon read ſtill louder; he then gave a
" cry, and exhibited ſigns of the moſt acute
" ſuffering; the experiment was again tried,
" and his hearing was re-eſtabliſhed by pain.
" Every other ſenſe was ſucceſſively excited on
" a ſimilar principle, and in proportion as he
" regained the uſe of them, the ſtupidity ap-
" peared to be diminiſhed; but the proſtration
" of ſtrength which followed, and the pain he
" ſuſtained brought him to the brink of the
" grave; at laſt, nature, without the aid of me-
" dicine, gained a complete victory. He re-
" covered his wonted powers, and is at this
" day one of our firſt philoſophers." *See* TISSOT's work already mentioned, for a number of other very remarkable caſes of this nature.

The increaſed action of the blood-veſſels of the brain by keeping that organ in a conſtant degree of tenſion, and the ſenſorial impreſſion, from the intenſity of thought, becoming remarkably vivid, act like ſtrong and powerful ſtimuli, and induce a degree of excitement nearly approaching to phrenitis.

If the caufes of this ftate occur frequently, a real and permanent delirium is often the confequence; for the mind of a perfon then becomes intirely occupied by a certain clafs of notions, which, from the fenforial impreffions acquire a degree of vividnefs that is unnatural to any perception, except thofe derived from fome of the external fenfes.

When once the objects of thought have acquired this degree of force, they obftruct the ufual impreffions derived from external objects, and this circumftance increafes the belief in the exiftence of his illufion.

This very dangerous ftate of mind is always increafed, *cæteris paribus*, in proportion as the objects of ftudy are few in number; for when they are numerous, and do not belong to one fubject only, the habit of eafily paffing from one chain of affociated ideas to another increafes; and thus all the faculties of the mind have a more equal degree of exercife.

Whether

Whether or not this hypothefis be received as a fatisfactory explanation of the origin of this fingular aberration of mind, the fact is undoubted, that men who are too much addicted to the exercife of that kind of fiction which is neceffary in the compofition of what are called works of imagination, often pafs altogether from the real world into an ideal one, where they take the infpirations of fancy for exifting form, and illufions for real fubftance. Thofe fimple acts of judgment which relate to the common occurrences of life, and which conftitute what is well denominated *common fenfe*, being much neglected by fuch people, the aberrations of reafon are feldom rectified by themfelves, and indeed they do not liften with pleafure to the reafoning of others on their fituation.

To many people it appears to be an inexplicable myftery how a perfon believes any thing to have a real exiftence which is not prefent to the external fenfes. This is in a confiderable degree explained by what has been already advanced in feveral parts of the work;

work; but there is another obſervation relative to the ſame ſubject which merits attention. It is this: that the *figure of impreſſion* which the vivid ideas produce on the brain is, by a neceſſary law of the animal œconomy, already explained, conveyed to the extremities of thoſe nerves of external ſenſe by which the object, had it been a real one, would have been naturally received. But when any impreſſion is made upon that part of our nervous ſyſtem, we always refer it, by a ſpecies of judgment derived from our experience, to ſomething without us. When a perſon of a full habit of body ſtoops down, ſo as to cauſe a ſlight congeſtion of blood in all the veſſels of the head, the blood-veſſels of the retina partake of this turgidity, and the preternatural diſtenſion produces an unuſual impreſſion on that nerve. The perſon, therefore, believes he ſees a number of black ſpots and filaments before his eyes, and concludes that they have a real exiſtence without him, until he is made acquainted with the nature of the phenomenon. When we preſs ſtrongly with our finger on our cloſed eye, we think we ſee a luminous

ſpot

ſpot before it. Whence, then, is the difficulty of ſuppoſing that the impreſſion of any ideal object, tranſmitted from the brain to that nerve, ſhould produce a ſimilar conviction on our mind?

A few examples, illuſtrative of this kind of diſeaſe to which genius is ſo much expoſed, remain to be added.

The firſt which I ſhall mention is taken from Bonnet, the ſecond is that of a juſtly celebrated author, diſtinguiſhed for the brilliancy, richneſs, and elegance of his imagination; I mean the immortal Tasso.

"I know a man," ſays Bonnet, "of great "reſpectability, ſtrict veracity, a ſound un-"derſtanding, and a good memory, and fa-"culty of judging, who, while quite awake, "and without any external cauſe whatever, "ſees, at times, various figures of men and "women, birds, chariots, buildings, &c. "They appear to him to be in motion; he "ſees them approach towards him, recede

" from him, and totally diſappear. Manſions " riſe ſuddenly before his eyes with all their " external and appropriate decorations. At " times the appéarance of the paper in his " room ſeems at once to be changed, and, in- " ſtead of the uſual figures which are on it, a " number of fine landſcapes appear to his " view. Some time after, not only all the " landſcapes and paper, but the furniture alſo " diſappear, and the bare walls preſent them- " ſelves to his eyes. But I ſhould loſe myſelf " in attempting to deſcribe all theſe phenome- " na; my object being ſolely to mention them. " All theſe objects appear to him in ſuch per- " fection, and make as ſtrong an impreſſion on " him as real objects." *Subtil*, p. 314. BONNET adds, that the operation for the cataract had been ſucceſsfully performed on him ſeveral years before this ſingular deluſion commenced. At the time that BONNET wrote the caſe, he ſays, that the left eye was almoſt uſeleſs, owing to the perſon's having greatly weakened it by too much reading, but the right one was tolerably good.

The following is the caſe of TASSO.

" At

"At Biſaccio, near Naples, MANSO had an "opportunity of examining the ſingular ef-"fects of TASSO's melancholy, and often diſ-"puted with him concerning a familiar ſpirit, "which he pretended converſed with him; "MANSO endeavoured in vain to perſuade his "friend that the whole was the illuſion of a "diſturbed imagination; but the latter was "ſtrenuous in maintaining the reality of what "he aſſerted, and to convince MANSO, de-"ſired him to be preſent at one of the myſte-"rious converſations. MANSO had the com-"plaiſance to meet him next day, and while "they were engaged in diſcourſe, on a ſudden "he obſerved that TASSO kept his eyes fixed "on a window, and remained, in a manner, "immoveable: he called him by his name, "but received no anſwer; at laſt TASSO cried "out, 'There is the friendly ſpirit that is 'come to converſe with me; look! and you 'will be convinced of the truth of all that I 'have ſaid.'

"MANSO heard him with ſurprize; he "looked, but ſaw nothing except the ſun-

"beams

" beams darting through the window; he caſt " his eyes all over the room, but could per- " ceive nothing; and was juſt going to aſk " where the pretended ſpirit was, when he " heard Tasso ſpeak with great earneſtneſs, " ſometimes putting queſtions to the ſpirit, " ſometimes giving anſwers; delivering the " whole in ſuch a pleaſing manner, and in " ſuch elevated expreſſions, that he liſtened " with admiration, and had not the leaſt " inclination to interrupt him. At laſt the " uncommon converſation ended with the " departure of the ſpirit, as appeared by " Tasso's words, who, turning to Manso, " aſked him if his doubts were removed. " Manso was more amazed than ever; he " ſcarce knew what to think of his friend's " ſituation, and waved any further converſa- " tion on the ſubject." Hoole's *Life of* Tasso, p. 48.

Since the peculiar ideas which in ſuch people gain that extraordinary force which has been deſcribed, generally ariſe from accidental cir- cumſtances, ſuch as the delight a perſon takes

in

in one ſubject of thought or ſtudy rather than another, it is evident that it becomes impoſſible to enumerate the various ſtrange notions which they may entertain. There is, however, one kind which demands particular attention, not becauſe it is eſſentially different from the others, but becauſe of the baneful effect it produces in ſociety, when unfortunately it occurs in men of learning: I allude to the firm belief of ſome men, who are perſuaded that they have been taken up into heaven, admitted to the preſence of the Almighty, and are ſelected from the multitude, as the happy means of explaining the more myſterious parts of religion. The learning of ſuch men enables them to deſcribe, in the moſt enticing colours, the viſions which they are convinced they have had; and the enthuſiaſm which naturally accompanies ſuch a belief of divine favor, gives them a degree of activity in propagating their opinions, which no other cauſe could perhaps produce. From the firſt moment that a perſon begins to doubt whether ſuch phantoms of the imagination be realities or not, from that moment is the diſeaſe confirmed;

firmed; vanity and pride, which ſuch people generally poſſeſs in a conſiderable degree, prediſpoſe them to the belief, for it is ſurely not unnatural to think that a perſon to whom is manifeſted ſuch divine partiality, ſhould conſider himſelf as inſpired, or, at leaſt, as fitted to be the inſtructor of mankind. SWEDENBORG, and others, have been variouſly conſidered. By ſome, they are looked on as ſaints, by others, as artful hypocrites, who wiſhed to eſtabliſh a ſect from intereſted motives. There does not appear, however, any foundation for the laſt opinion. They themſelves are deluded, and as they have the wants and common paſſions of men, and as their delirium is confined to one particular train of thought, it is natural to imagine that they ſhould, like other people, yield to the influence of ſuch ſights, and the paſſions which they give birth to.

The dreams of SWEDENBORG, which have given birth to a new ſect in this country, are not more ſingular than thoſe of a beautiful Spaniſh lady, who was the founder of a convent, and who was ſanctified after her deceaſe:

I allude

I allude to that lovely, mild, and moſt uncommon fanaticiſt, St. THERESA. (See Appendix, No. 6.)

A circumſtance which tends to impoſe on the judgment of many, in regard to ſuch patients is, that the diſeaſe is rare, and happens only to very uncommon characters; it is not ſo rare, however, but that many caſes of it occur: but it does not always happen that thoſe who are thus inſpired can write an intelligible deſcription of what they have ſeen, and this circumſtance, therefore, muſt neceſſarily add to the high eſtimation of thoſe who diſtinguiſh themſelves by an accurate account of their celeſtial viſions.

' That SWEDENBORG, and Saint THERESA are not the only perſons who have viſited heaven *while on earth*, might be ſufficiently proved by many caſes. The following is an extraordinary one, becauſe it ſhews the influence of the belief, without the deſire of making converts. It is written by the lady herſelf, who ſaw the celeſtial ſights, and it was ſent to the editors of the Pſychological Magazine, by a reſpecta-

ble

ble clergyman of Augſburg, of the name of MULLER, who accompanied it with a letter. In this letter he ſays, the woman who drew up the following relation (a perſon in other reſpects of good underſtanding) perſiſts, moſt ſtrenuouſly, that ſhe ſaw and heard every thing which ſhe deſcribes.

" She is of a tranquil, ſteady character, and " has no other kind of ſuperſtitious belief." he adds, that he has many other papers of her's relating to the ſame ſubject, which he offers to ſend to the editors of this magazine, if they chooſe to aſk for them.

The perſon alluded to, commences her narration with a kind of confeſſion of faith in the " *Lord of Lords*," for the ſingular and gracious condeſcenſion he has ſhewn her, and then ſhe begins the following account of what ſhe has ſeen and heard.

" In the fourth year of my life, when I was " engaged only with childiſh amuſements, I " took the folio bible in which my late ſiſter

" (who

" (who was then in the ſtreet with her maid)
" had been reading. This book I took from
" the table, and rolled it with my hands and
" feet to a bank, where I had been ſitting,
" and I then placed my feet on it, that I
" might the more eaſily dreſs and undreſs my
" little doll.

" I had ſcarcely taken my place above a
" minute, when I heard a voice at my ear ſay,
" Put the book where you found it; but as
" I did not ſee any perſon, I did not do ſo.
" The voice, however, repeated the mandate,
" that I ſhould do it immediately, and, at the
" ſame time, I thought ſomebody took hold
" of my face. I inſtantly obeyed, with fear
" and trembling, but not being able to lift
" the book upon the table, I called the ſer-
" vant maid to come quickly and aſſiſt me.
" When ſhe came, and ſaw that I was alone,
" and terrified, ſhe ſcolded me, as nobody
" was there.

" When I grew up in years, it was my moſt
" earneſt wiſh, and greateſt delight to know

" what that book contained; and I am not " aſhamed to confeſs I have read it twice from " beginning to end. The firſt time, my un- " derſtanding being weak, I did not ſuffici- " ently comprehend it. But afterwards it " became more intelligible to me, by often " hearing ſermons, and reading religious " books.

" In my ſeventh year my ſiſter and I were " playing as children do, when (it was then " ſummer) a great clear flame appeared to " come in through the chamber door, in the " middle of which was a long, white light, " about the ſize of a child of ſix weeks old; " it remained about half an hour in the ſame " ſituation, near the ſtove, and then went out " again by the room door; the white light " firſt, and the flame after it. We found " nothing in the adjoining room but my fa- " ther and mother, who were employed: " they ſaw nothing, and ſcolded us accord- " ingly; but it always remained in our me- " mory.

" 1770,

" 1770. My husband and I left Strasburg, " on account of the dearness of provisions. " While we were on the road, there appeared " to me, about half past five o'clock in the " morning, our blessed Saviour, in a dream, " who spoke half an hour with me; I did not, " however, pay attention to what he said, for " joy prevented me, and I only thought of " what I should say to him. After he had " done speaking, he disappeared.

" 1771 In the month of December, I con" stantly received disagreeable letters from " my husband, who was then in Augsburg, " while I was at my native home. This " conduct on his part caused me to take " the resolution of desisting from prayer. I " thought the Lord had forsaken me, and on " the Sunday evening following, I thanked " God, once for all, and went to bed.

" I awakened towards morning, but did " not know what time it was. At once, it " appeared, to my great astonishment, to be " broad day-light, and at my bedside sat a

" heavenly human figure, in the ſhape of a " man, about ſixty years old, in a blueiſh " robe. His countenance was like the cleareſt " red and white cryſtal, his hair bright and " fair; he looked at me with tenderneſs, and " ſaid, *Proceed, proceed, proceed* *. How am " I to explain that? thought I to myſelf. " Immediately it was explained to me by a " young perſon, alſo as beautiful as an angel, " who ſat on the oppoſite ſide of my bed; ' Proceed in prayer,' he ſaid, ' proceed in ' faith, proceed in trials.'

" While they thus ſpoke to me, a light like " that reflected from the river Diele, ſeemed " to ſhine in the apartment. It moved up " and down, and then diſappeared, upon which " I felt as if ſome perſon pulled out the hairs " of my head, but the pain was to be borne. " The light came again, and the pain ceaſed

* *Halt an, halt ein, halt aus.* I cannot recollect in the Engliſh language any three words between which there is the ſame ſhade of difference as in theſe German ones, and which at the ſame time are, as in the preſent inſtance, to be conſidered as nearly ſynonimous.

" intirely;

" intirely; it again diſappeared, and I felt " as if the fleſh on my back was torn from " the bones by pincers; the light came again, " and I was then better. It again went " away, and I felt as if my ſhoulder blades " were torn from each other; my heart, alſo, " felt, as if it were torn out of my breaſt, and " laid between my ſhoulders, where it died *. " I thought theſe muſt be my laſt moments; " and I then beheld the devil beſide the young " angel. He came from behind the bed, with " his back foremoſt. All that I ſaw of him, " however, was his arm, a tail about two " ſpans thick, which reſembled a ſerpent, and " his neck, and the back part of his head. " I had not time to examine him minutely, " for the angel puſhed him away with his " elbow.

* Although we have no information of the ſtate of this perſon's health, it appears very probable, from this part of the hiſtory, that ſhe was afflicted with epilepſy, or ſome ſimilar convulſive diſorder; the aura epileptica in an enthuſiaſtic mind like hers, might be referred to a divine light. The pulling of the hairs, and tearing of the fleſh, are intelligible enough.

"The light came again, and both persons "looked mournfully at it. The young person "son then said, 'Lord, this is sufficient;' "and he repeated these words three times. "Whilst he repeated them, I looked at him, "and beheld two large white wings on his "shoulders, and therefore I knew him to be "an angel of God. The light immediately "disappeared; the two figures vanished; and "the day was suddenly converted into night; "my heart was again restored to its right "place, the pain ceased, and I arose. It was "then five o'clock in the morning.

"1772. Previous to my leaving Landau, I "was again graciously favoured with a sight of "our Saviour. It was about five o'clock in "the morning, and he was white in person "and in dress.

"1773. After I left my native country, and "returned to my husband; he made my life "so bitter to me that I thought only of death. "I then formed a resolution extremely contrary to my natural disposition. I deter-

"mined

" mined to quarrel with him, and oppofe " him by violent means ; one of us muft die, " I thought, or elfe my whole life will be " fpent in this difgufting union ; and it is faid " in the holy writings, that this life of mifery " is not worth the happinefs we are to expect " hereafter. My forrows increafed, and I " went to bed in tears.

" I awakened about four o'clock in the " morning, and imagined myfelf in my fa- " ther's houfe, on the river Diele. I looked " up into heaven, and faw a water-dog walk- " ing on the firmament.

" As foon as it had paffed by, the fkies de- " fcended to me, and my eyes were changed " on purpofe to fee new fights, for I faw " many hundred thoufand miles. The man- " fion of God ftood in the centre, lightly en- " veloped in clear blue clouds, and furrounded " with a fplendor of fuch various colours as " are unknown to the world below. In each " colour ftood fome millions of men enrobed " in garments of the fame colour with that in

" which

" which they ſtood; for inſtance, thoſe who " ſtood in red, were clad in red, and thoſe " in the yellow, had robes of yellow; and the " faces of all theſe men were turned to the " manſion of the Almighty. And there came " out of the manſion a moſt lovely female, " clothed in the brighteſt luſtre of heaven, " and a crown on her head. She was accom- " panied by three angels, one on her right " hand, and one on her left, the third walked " beſide her, and pointed to the crowd who " ſtood in the ſplendid colours.

" In a minute the heavens were cloſed, and " again opened as formerly, but the woman " and angels were not to be ſeen: but our " bleſſed Saviour came out of the manſion, " followed by a long train of attendants, and " he deſcended through all the ſplendor I have " deſcribed. The Lord and his attendants all " looked ſmilingly upon me. They were " dreſſed in white, and wherever they went " was a clear white. When he approached " me near enough, that I could touch his " foot, I was frightened, and awoke. It was

" then

" then half paſt four o'clock; I aroſe, and
" conſidered that my preſent life was not to
" be compared with ſuch joys."

Somewhat analogous to this caſe is that of the Rev. JOHN MASON, a clergyman of Water-Stratford, near Buckingham. This pious man evinced a very ſound judgment on every ſubject but one, and that one was of ſuch a nature as to make him be juſtly ranked in the claſs of celebrated viſionaries. He was perfectly perſuaded, in his own mind, that he was the Elias who was deſtined to announce the coming of Jeſus, who was to begin the Millennium at Water-Stratford.

" MASON was obſerved to ſpeak rationally
" on every ſubject that had no relation to his
" wild notions of religion. He died in 1695,
" ſoon after he fancied he had ſeen his Sa-
" viour, fully convinced of the reality of the
" viſion, and of his own divine miſſion."
Granger's Biographical Hiſtory of England, Vol. IV. p. 207.

It

It is by no means eaſy to diſcover the circumſtances which firſt give riſe to the peculiar imaginary objects in the reality of which ſuch men believe. In other caſes, however, it is evident enough. BENVENUTO CILINI, whoſe name is well known to every man of taſte, was endowed with an uncommonly vivid imagination, as appears conſpicuous in various parts of the life he has written of himſelf. Another predominant feature in his character was vanity; and to the powerful influence of theſe two cauſes I am inclined to believe that ſingular illuſion was owing, which affected him, and which cauſed him to believe that he was ſurrounded by a ſort of glory.

"This reſplendent light," he ſays, "is to "be ſeen over my ſhadow, till two o'clock in "the afternoon, and it appears to the greateſt "advantage when the graſs is moiſt with dew; "it is likewiſe viſible in the evening, at ſun-"ſet. This phenomenon I took notice of "when I was at Paris, becauſe the air is ex-"ceedingly clear in that climate, ſo that I "could diſtinguiſh it there much plainer than

"in

" in Italy, where the moiſts are much more " frequent; but I can ſee it there, and ſhew " it to others, though not to ſo much advan- " tage as in France."

It muſt be evident that when ſuch an aberration of mind as I have deſcribed once prevails, the perſon is at all times apt to overſtep the boundary of reaſon, not only on every ſubject connected with the prevailing notion, but alſo from the influence which the paſſions, when accidentaly excited, muſt have on his conduct. Many of the murders and acts of ſuicide which religious enthuſiaſts commit, are ſo many proofs of the truth of this poſition. That murder often ſprings from this principle, the aſſaſſination of HENRY IV. of France, the maſſacre of the Hugonots, and the many victims which fell a ſacrifice to the religious frenzy of MARY, of England, ſufficiently confirm.

Religious enthuſiaſm gives birth to two irreſiſtible deſires, both of which generally terminate in ſuicide: the one a deep melancholy, the other a very ſtrong deſire of eternal happineſs.

pineſs. The firſt is, unfortunately, a very common caſe in this country, eſpecially among the lower orders of Methodiſts. The pain which accompanies this melancholy becomes inſupportable ; a ſtate of deſpair follows, and the deſire of relief which ariſes as a natural conſequence, leads to the completion of the crime. Of this, more will be ſaid in the chapter on Grief.

In the other caſe, there is no deſpair, the perſon has an anxious longing for a happineſs which he believes he is deſtined to enjoy as ſoon as he departs from this world ; he cannot brook the delay, and therefore yields to the urgency of the internal impulſe.

Religious enthuſiaſm has a third termination which is in abſolute frenzy, and in which the perſon, like all lunatics, yields to the paſſions which are accidentally excited in his mind. The following caſe offers an aweful warning to thoſe who are entruſted with the education of youth, how they allow their imaginations to be exalted by ſubjects which are altogether

altogether beyond the reach of human understanding. It ſhews the neceſſity of confining men of a warm fancy to ſuch ſtudies as give exerciſe to reaſon, rather than to wild and extravagant ſpeculation. The caſe is extracted from Vol. VII. of the Pſychological Magazine, and is written by Profeſſor GRUNER, of the univerſity of Jena, a gentleman diſtinguiſhed for his learning, and the excellence of his numerous writings. The profeſſor ſays, that the facts which are related by him, are taken partly from his own perſonal knowledge of the culprit, and partly from the regiſter of the court of juſtice.

" Among the ſtudents of theology at the " univerſity of Leipſic, there was one of the " name of RAU. His ſtudies were chiefly di- " rected to the Revelations of St. John, in the " reading of which he took much delight. " He did not at firſt chooſe to venture alone " in this labyrinth of holy myſtery, and he, " unfortunately, ſelected as his guides, two " celebrated enthuſiaſts. BENGEL and CRU- " ZIUS were his torch-bearers.

" When

" When his imagination became heated by " the ſublime pictures which were preſented " to his mind, he began to try if he himſelf " could not develope the viſions of the holy " ſaint. He thought himſelf happy in his " firſt attempts, and his imagination being " once on fire, he could not diſcover that his " explanations were gratuitous and unfound- " ed. He arrogated to himſelf the praiſe of " uncommon penetration; and at laſt he be- " lieved himſelf to be inſpired. The natural " conſequence was, that he could not endure " thoſe who differed from him in opinion; he " neglected the common duties of his ſitua- " tion, and became paſſionate and moroſe. " He thought himſelf ſuperior to the reſt of " mankind, becauſe the treaſures he had found " in the ſacred writings ſeemed to be con- " cealed from all but himſelf. It was not, " therefore, to the natural powers of his " underſtanding, he imagined, to which he " was indebted for theſe lights, but ſome ſu- " pernatural gift with which he was endowed. " Every one knows, however, that it is the " duty of him who is preternaturally enlight-

" ened,

" ened, to disperse the rays of his wisdom as " wide as possible. No sooner did he find the " divine call within him, than he preached his " opinions openly. The last sermon he ever " delivered ended with these remarkable " words: 'He who believes not in witches, ' does not believe in the devil; he who be- ' lieves not in the devil, does not believe in ' God; he who believes not in God shall be ' damned.' Upon this the magistrates of " the town wished to confine him in some " place of safety, but at the entreaties of his " father, he was permitted to remain under " his custody.

" RAU began to be ashamed of what he had " done, and refused to go out of the house. " He at last appeared, however, to grow bet- " ter, and was prevailed upon to take short " walks; and he expressed to some friends " who visited him, a strong desire of being " restored to his wonted powers of mind, in " order that he might recommence his stu- " dies.

" On

" On the 4th of Auguſt, 1779, being the " day after his friends viſited him, the neigh- " bours were much alarmed on hearing RAU " abuſe his father. Upon knocking at the " door, he opened it, and allowed them to " come in; the father lay on the floor, welter- " ing in his blood, murdered by his ſon, who " had ſtabbed him in fifteen different places, " and had cut his throat. RAU walked back- " wards and forwards to the window, agitated " alternately by contrition, the conſciouſneſs " of his crime, and ebullitions of inſanity. At " one moment he accuſed himſelf of having " committed ſo horrible and unpardonable an " offence: at another, he denied his having " murdered his father, ſaying it was an old " Jew, and a Turk, whom he had killed.

" Upon being aſked in the court of juſtice " what his name was, he anſwered, that he " believed he had never been baptized, neither " did he conſider the man whom he had killed " as his true father, becauſe he did not re- " ſemble him. Before he went out of the " court, he ſaid, that he formerly had ſtudied

" the

" the Revelations of St. John, but that now
" he had nothing to do with them; yet he
" never ſhewed any marks of contrition while
" in priſon, nor did he utter any of his former
" opinions.

" His conduct was outrageous, and exhi-
" bited pride and contempt for all mankind.
" During a violent ſtorm he broke out into
" the following exclamation: 'The wild
' prince is coming, I know the fellow well,
' for I have heard him often.'

This is not a very common caſe, but it is by no means uncommon for people whoſe imagination has been exalted by ſuch objects of ſtudy as give little or no exerciſe to judgment, to conceive ſuch a firm conviction in the reality of their thoughts, as to cauſe them to be juſtly conſidered as delirious people.

Tissot relates the following caſes: " J'ai
" vu une femme qui avoit paru très ſenſée
" juſques a l'âge de vingt-cinq ans, qui s'étant
" par malheur attachée a la ſecte de *Hernbuttes*

ou

" ou *Moraves*, s'enflamma, ſe pénétra telle-
" ment de l'amour de Jeſus Chriſt qu'elle ap-
" pelloit ſon agneau, qu'elle ne put plus s'oc-
" cuper que de cette ſeul idèe, et ſans autre
" cauſe, devint imbecille dans l'eſpace de
" quelque mois; elle ne conſerva d'autre ſou-
" venir que celui de ſon ami. Je la vis preſ-
" que tous les jours pendant ſix mois, et dans
" toutes les viſites que je lui fis, je n'obtins
" pour réponſe à mes queſtions que ces ſeuls
" paroles, *mon doux agneau* qu'elle répétoit de
" demi heure en demi heure, les yeux baiſſés.
" Elle vecut ainſi pendant ſix mois, et mourut
" enſuite de deperiſſement. Mais ſans aller
" chercher des examples plus loin, nous avons
" vu etudier dans cette academie, il n'y ce
" pas long-tems, un jeune homme de merite
" qui s'etant mis dans la tête de decouvrir la
" quadrature du circle, eſt mort fou a l'hotel
" Dieu a Paris."

The caſes of delirium which have been produced by intenſe application to ſuch ſubjects of ſtudy as give an extraordinary degree of force to imagination, are ſo numerous, that this

this chapter might be eaſily ſwelled to more than twice its extent by an enumeration of the principal ones. But thoſe which have been brought forward are ſurely quite ſufficient to prove the melancholy truth of the hypotheſis laid down, that repreſentations of the mind, when frequently renewed by acts of imagination, at laſt acquire a degree of vividneſs which ſurpaſſes thoſe derived from external objects; and as the principal quality of a mental perception, or repreſentation, which makes us believe in the reality of the object, or objects which it repreſents, is the clearneſs of its parts, it is not wonderful that men of genius, who often confine their attention to one branch of ſtudy, ſhould be more expoſed to ſuch illuſions than any other claſs of people.

Before theſe kind of deliria occur, the bodily health of the perſon generally ſuffers, and this diſordered ſtate of health is very ſimilar to that which ariſes from a ſedentary life, and from the effects of grief, which will be deſcribed hereafter.

CHAPTER VIII.

ON VOLITION, AND ITS DISEASES.

Distinction to be observed between the ideas which excite bodily action, and those which terminate in some mental operation. Motives of action, what they are; classification of them. Superiority of motives of action, and their sensorial impressions over physical stimuli producing pain. How far a person may be said to be a free agent. How one idea produces a complex bodily action. How several motives of voluntary action operate efficaciously at one and the same time, and how one train of thought only can be present to the mind. The diseases of volition. Hesitation and stuttering accounted for, and traced to their origin. What circumstances are necessary in order that a motive of action should produce its full corporeal effect; and what happens when these are deficient. Cases illustrative of the various axioms laid down.

THERE are certain ideas which merely excite some one or several of the mental facul-

ties

ties into action, and produce little or no effect on the body; there are others peculiarly fitted to excite the principle called the will, and by so doing occasion the movement of several parts of our corporeal frame. These last ideas are commonly called *motives* of action, by philosophical writers. What are these motives? In what respect do they differ from those which only give exercise to the faculties of the mind, such as memory, imagination, or judgment?

The term motive of action is to be considered as a generic one, comprehending various species; for, although all ideas which are so called may be reduced under one class, in regard to their general effect, that is, inasmuch as they all are stimuli, which excite the will, yet they differ from each other in many particulars.

Observation teaches us that the will is excited

1ſt. By corporeal ſenſations of pleaſure and pain.

2dly. By the paſſions.

3dly. By certain judgments, or concluſions, which ariſe from the comparing of thoughts.

When we obſerve the two laſt claſſes of cauſes more narrowly, and reflect on their nature, we find reaſon to believe that the peculiar ideas of the paſſions and judgments which excite volition, all act upon the principle of pleaſure or pain, that is, they are either agreeable or diſagreeable, occaſioning deſires or averſions; for in fact it is always ſome cauſe of deſire or averſion which makes us commit a voluntary act. A complete proof of this poſition cannot ariſe but by analyzing human action in general, and tracing it to its ſource. As this is attempted in the next chapter, it may either be read at preſent, or the concluſion muſt, for the preſent moment be acceded to.

One

One would imagine that if the mind and brain were one and the ſame thing, as Dr. PRIESTLEY, and ſome others ſuppoſe, it would then follow that many phyſical cauſes of pain would overcome the agency of any thought, inaſmuch as bodily pain conſiſts in a forcible diſorganization of the elongations of the ſubſtance of the brain itſelf; for this is an effect we cannot ſuppoſe an idea capable of producing.

It is well known, however, that the ideas which conſtitute our deſires and averſions, often overcome the moſt cruel tortures which can be inflicted on the body. A ſurgeon is often under the neceſſity of ſeparating from the body of a tender female, the moſt acutely ſenſible part of her whole frame; many conſiderable nerves are divided, ſtretched, and often compreſſed, yet a thought prevents a ſingle groan from being uttered. Dr. ROBERTSON, in his Hiſtory of America, aſſures us that the trials which the candidates for royalty, among ſeveral of the native American tribes, ſubject themſelves to,

conſiſt

confiſt in ſuch tortures as a perſon of this country deems it almoſt impoſſible for the human body to ſuſtain; they are beaten until they are disfigured; they are ſtung, and bitten with poiſonous inſects, and expoſed to ſuffocating vapours, till they are almoſt dead. Some of them actually die during the trial; but, if they utter a groan, they are judged to be unworthy of the command of a great and brave people.

The concluſion to be drawn from theſe facts is, that the ſenſorial impreſſion which thought occaſions, is often a more powerful ſtimulus to volition than the ſenſorial impreſſion, which ariſes from the laceration of the nerves; but the queſtion is, what is the nature of this power which produces this ſenſorial impreſſion. We ſay it is a *ſtronger* one than the external agent; our notion of greater or leſs ſtrength is derived from the agency of phyſical cauſes; and having no abſolute knowledge of mind, or of the nature of thought, we are apt to give way to our aſſociated ideas, and believe that ſtrength is the ſame thing in re-

gard to mind, as in regard to body; and that, therefore, the mental cauſes of voluntary action are nothing elſe than mechanical cauſes; but this is evidently a *petitio principii*, a mere ſuppoſition, derived from our limited knowledge of the agency of bodies, and our total want of knowledge of the nature of mind, and of its principles and faculties. We muſt remain ſatisfied with avowing total ignorance in regard to this matter, and at the ſame time guard ourſelves againſt admitting any haſty concluſions drawn from a limited analogy.

In many caſes, deliberation precedes voluntary action; this gives riſe to the idea that they are often related to each other as cauſe is to effect. The common conviction of mankind is, that we have a power of chooſing between motives, or a liberty of acting, as it has been called. Every perſon who is but ſlightly acquainted with metaphyſics knows that this doctrine has been conteſted with much ingenuity, and often with much unbecoming acrimony. This is not the place to recite the arguments which are brought forward in ſupport of the oppoſite ſides of the

queſtion;

queſtion ; and I ſhall therefore ſimply ſtate my own opinion in a very few words.

Every man may be ſaid to have liberty of action, inaſmuch as he has the power of reflecting, or deliberating on the motives which incline him to do any thing, as well as on thoſe which diſincline him to do ſo. This operation of the mind, which is called chooſing, is nothing elſe than a ſpecies of judgment, or the act of comparing perceptions. The cauſes which excite us to chooſe, are always ſenſations of pleaſure or pain, or elſe they are deſires or averſions ; for no man can have his will excited by things which do not intereſt him. The effects of habit do not belong to this inquiry. When once we have determined in favour of any one motive, or in other words, have drawn a certain concluſion, then this thought (the concluſion) by a ſecret influence, which is unknown to us, becomes the exciting cauſe of volition, and we act accordingly. Every motive which produces a voluntary act, may be ſaid, in a figurative ſenſe to have been the moſt powerful of all the other motives which were conſidered at the ſame time, and ſo

far

far we may be ſaid to act from a neceſſary impulſe, but as we have the power of rejecting ſeveral motives in making our choice, ſo far we may alſo be ſaid to have a free will. To return to our inveſtigation.

The firſt thing to be developed is this: how complicated bodily actions ariſe from a ſingle perception. It is of no conſequence what inſtance we ſelect for the ſake of example.

When a perſon reads aloud, the preception of the words immediately excites our utterance of them. The pronunciation of a letter is a complex bodily action, in which various muſcles of different parts are excited to contract by a ſingle thought. When a perſon is about to pronounce a letter, the firſt thing he does is to take a quick inſpiration, and then throwing the muſcles of the larynx and glotis into action, and at the ſame time forcing out the air which he had inſpired, he produces a ſound; this ſound, according as it is interrupted or modified by the motion of the tongue, and lips, and other parts of the mouth, becomes the ſign or expreſſion of the letter; thus, in pronouncing the

the letter *t*, the ſound is interrupted by the application of the tip of the tongue to the palate, and in pronouncing the letter *r*, the peculiar ſound is formed by the quick and repeated application of a greater portion of the point of the tongue to a greater portion of the palate, &c. Now as in theſe inſtances a great number of different muſcles which obey the will, are thrown into action, it may be aſked, How the repreſentation of a ſingle letter in the mind is ſufficient to produce ſuch a complicated bodily effect? Is it reaſonable to ſuppoſe that a ſingle perception ſhould produce ſeveral ſenſorial impreſſions, each of which is conveyed to different muſcles which are thrown into action.

In order to throw ſome light on this intricate queſtion, I would obſerve, that although in adults a number of complicated bodily actions ſeem to ariſe immediately from one perception only, yet, in childhood, when theſe actions were firſt attempted to be performed, each particular act required a diſtinct effort of volition.

It

It is impoſſible for us to bring back to our recollection the conſciouſneſs of what paſſed in our minds when we firſt began to imitate the ſounds of our parents and nurſes; but if any one, endowed with a common degree of obſervation, will pay attention to the efforts which a child makes when learning to pronounce a letter which requires a complicated action of the organs of ſpeech, he will be, in a great degree, convinced of the truth of the above aſſertion; or, what will probably bring more conviction to his mind, will be to attempt to perform any complicated bodily act which is new to himſelf. Thus, when a perſon firſt begins to play the violin, it requires a diſtinct effort of attention to hold it in a proper poſition; another to place the fingers, another to draw the bow, another to prevent the bow from ſliding to the fingers, or ſlipping over the bridge. This has been often taken notice of; the concluſion to be deduced from it is, that in all ſuch caſes there is ſome peculiar proceſs interpoſed between the original mental perception, giving riſe to the voluntary act, and the action on the brain, by which

which the muſcles are made to move. It would appear as if volition acted by peculiar impulſes, and prevented the mental perception from immediately terminating in a correſponding ſenſorial impreſſion, as the perceptions of recollection and imagination do. When we recall to our mind any of our friends, the perception ſeems immediately to renew in our eyes the figure of the perſon; that is, the ſenſorial impreſſion, correſponding to the perception, is, by a law of nature, tranſmitted along the nerves through which the impreſſion was firſt received. The perceptions, however, which are to excite voluntary action, do not ſeem to operate in this way, but through the intervention of that principle of the mind, which we call the *will*, and which acts by peculiar impulſes of its own upon the brain, or nervous fluid. It may be ſaid, with juſtice, that theſe impulſes are ſo many diſtinct ſtimuli, the impreſſions of each of which, when conveyed by the nerves to the various muſcles, neceſſarily throw them into action.

A perſon

A perſon is always conſcious of each of theſe diſtinct efforts, or impulſes of the *will*, when he performs any new and unaccuſtomed combination of voluntary action; as when a perſon begins to play on any muſical inſtrument, or to pronounce the words of a language which he is learning, for the firſt time.

Afterwards, when by frequent repetition, a kind of union or principle of concatenation has been eſtabliſhed between all the motions which are neceſſary for the completion of the act, we become leſs and leſs conſcious of the efforts employed, until at laſt the whole chain of bodily action ſeems to flow, as it were, from the firſt perception. Theſe obſervations apply to all voluntary acts whatever; conſciouſneſs and attention at firſt accompany every new effort of volition; theſe are gradually diminiſhed in proportion as the bodily actions are repeated, and at laſt they ſeem unneceſſary to their production.

When once we have acquired this degree of facility in performing any aſſemblage of bodily actions,

actions, the mind is then open to a new train of thoughts, or even motives of action, to which it could not have attended before; thus those who play with ease on the *piano forte*, or some other musical instruments, can play and speak at the same time; but in order to do this they must be well acquainted with the piece of music they perform, and the subject of their conversation must not be such as to require any great effort of attention; for in this case either the mental action, or the corporeal one ceases.

Between the ideas which excite bodily action, and those which give exercise to the mental faculties alone, there seems to be this essential difference, that several distinct series of the former may go forward at one and the same time, each producing its peculiar bodily movements, without in any way obstructing each other; whereas it appears that we cannot admit of more than one subject of thought at a time. A person may be impelled by one train of ideas to walk, by another to perform certain operations with his hands, and by a third

third to ſpeak; and all theſe acts, each ariſing from an impulſe of this mental principle called volition, ſhall go on at the ſame time without impeding each other; but no man can entertain two ſubjects which excite memory, or imagination, or judgment, at one and the ſame moment of time.

It was neceſſary to ſtate theſe facts in order to explain the nature of certain very curious diſeaſes, which ariſe from an irregular action of this principle.

When two different ſhades of the ſame thought ariſe in quick ſucceſſion, each of which neceſſarily has a tendency to affect the ſame ſet of nerves, the influence of the one is partially deſtroyed by that of the other, and an incomplete bodily action takes place. If a ſudden thought makes a perſon who is in the middle of a ſpeech imagine that there is a better expreſſion for his thoughts than that which he is about to employ, the action is immediately interrupted, and he either ſtops, or ſtammers. When this

this complaint is ſlight, it is called *heſitation*, when great, *ſtammering*.

Every perſon is more or leſs expoſed to the firſt of theſe affections. It may ariſe from various claſſes of ideas, but moſt commonly it is the offspring of doubt. Doubt often ariſes from great timidity; and where this feeling is ſtrong, and natural to the conſtitution of ſome people, heſitation becomes a very early habit. In other caſes it ariſes from accidental circumſtances. There is one cauſe which produces it accidentally in many young people, which cannot be too much reprobated: I mean the injudicious ſeverity of ſome parents and teachers. The fear of pain, and the fear of offending, and the fear of being found in fault, are often predominating features in the characters of young people, and moſt commonly in thoſe who are endowed with what is figuratively called great ſenſibility of mind. If ſuch a youth, while he is repeating his taſk, be regarded with a look, or threatened, as if it were expected he would fail, he commonly does ſo from mere apprehenſion, and this being

being often repeated he acquires the habit of hesitating. Such a defect, although it be a real evil, is seldom considered as a disease; and, unfortunately, few parents are sufficiently attentive to their children at the early periods of life to observe its approach. Many others have it not in their power to do so, owing to their children being separated from them, and shut up in seminaries, where the seeds of many other mental disorders are sown.

The origin of the distressing habit called stammering, generally occurs also in early life. It arises either from a species of doubt, or else from imitation, for it is in no case to be considered as natural to any constitution.

A very singular phenomenon concerning this impediment in speech is, that the hesitation is generally confined to the pronunciation of a few letters, and this is the cause why its effects are always heard and seen; for if it concerned whole words, a total stop would be put to speech. The person begins a concatenated chain of actions, or, to speak in plain language, he begins to pronounce the words which correspond to the

thoughts that are prefent in his mind, he arrives at one of the letters alluded to, and immediately a doubt arifes in his mind how it is to be pronounced. I am at prefent fpeaking of the origin of the complaint—he then begins to pronounce in a different way, and the doubt again arifes; he then returns back to the laft pronounced fyllable of the word, and repeats it, but upon coming to the letter, the doubt again arifes, and gives a different direction to the fenforial impreffion, and he again attempts to fpeak another letter. He cannot ftop, for he is in the middle of a word, the pronunciation of which he has been accuftomed to conclude, and he therefore continues to ftruggle with it, till at laft, owing to fome accidental caufes, which it is not eafy to difcover, he accomplifhes its proper utterance.

Volition, now and then, fails to produce its full corporeal effect, from various difeafed ftates of the brain, or nerves, or from the influence of fome powerful fenforial impreffion, counteracting thofe of volition. In palfy, and in the night-mare, a perfon is confcious that he makes efforts of volition to move cer-

tain parts of his frame, and yet cannot ſucceed, for the corporeal cauſes which produce theſe diſeaſes, prevent the impulſe from being conveyed to the parts intended to be moved, and conſequently they cannot be ſtimulated into action by that principle.

In order that a motive of action ſhall produce its corporeal effect with due force and celerity, it is neceſſary that the nervous fluid be ſecreted in due quantity. If this is not the caſe, the impreſſions which are made by the action of this principle are too much weakened before they reach the muſcular parts, and hence a feeble motion only occurs. This is the reaſon of that diſtreſſing indolence which many people who have long laboured under ſtomachic complaints, or other diſeaſed viſcera, or women afflicted with hyſteria, frequently are ſubject to. Such people are conſtantly agitated between the deſire of accompliſhing many duties which they are conſcious they ought to perform, and the painful bodily languor which oppreſſes them. The nervous

fluid being ſecreted in ſmall quantity, the ſenſation of fatigue is ſoon induced, and the body therefore does not eaſily obey the dictates of the will.

All motives of action which ariſe immediately from external agents, act in general more powerfully than reflex thoughts or ideas, which are merely recalled to the mind. This does not require any illuſtration.

The longer any external object which yields a motive of action acts upon us, the more forcibly, and the more eaſily does it produce its effects. There is a very remarkable caſe narrated by the learned Dr. HERZ, in Vol. VIII. of the Pſychological Magazine, which may be conſidered as an illuſtration of this poſition.

" In Auguſt, 1785," ſays the Doctor, " I " was called to an officer of the artillery, a " man about forty years old, who, as I was " informed, was ſeized with a palſy in conſe- " quence of cold, and violent anger. His " tongue, hands, and feet, were lamed by the " attack.

" He

" He was under the care of one of our firſt " phyſicans, at whoſe deſire I was conſulted " concerning the propriety of applying elec- " tricity. From the time that this remedy was " firſt employed, until the following year, I " never ſaw him; but he then ſent for me " again, as his own phyſician, he ſaid, had " deſerted him.

" I found him ſo much recovered as to " have the complete uſe of his feet; his hands " alſo were ſtronger; but in regard to his " ſpeech, the following very remarkable cir- " cumſtance was to be obſerved. He was " able to articulate diſtinctly any words which " either occurred to him ſpontaneouſly, or " when they were ſlowly and loudly repeated " to him. He ſtrenuouſly exerted himſelf to " ſpeak, but an unintelligible kind of mur- " mur was all that could be heard. The ef- " fort he made was violent, and terminated in " a deep ſigh.

" On the other hand, he could read aloud " with facility. If a book, or any written

" paper,

" paper, was held before his eyes, he read ſo " quick and diſtinctly, that it was impoſſible " to obſerve that there was the ſlighteſt fault " in his organs of ſpeech. But if the book or " paper were withdrawn, he was then totally " incapable of pronouncing one of the words " which he had read the inſtant before. I " tried this experiment with him repeatedly, " not only in the preſence of his wife, but of " many other people. The effect was uni- " formly the ſame."

Dr. Herz, who juſtly attributes this ſingular phenomenon to the ſuperior ſtrength, and to the longer duration of impreſſions received by the eyes, mentions another caſe which fell under his obſervation, and which has a great ſimilarity to the one already cited. A young lady, who had fallen into a ſtate of melancholy in conſequence of deep grief, could not be made to pronounce a word, either by means of threats, or intreaties. But if a book was preſented to her, and ſhe was requeſted to read it, ſhe did ſo with the facility of a perſon in perfect health. In ſome caſes, the action of

the

the will is totally checked by a diseased state of the brain and nerves, as is the case in that rare malady called catalepsy, of which the following is a very remarkable instance. It is extracted from the *Psychological Magazine*, Vol. V. part 3, page 15.

" A young lady, an attendant on the prin-
" cess of ——, after having been confined to
" her bed for a great length of time, with a
" violent nervous disorder, was at last, to all
" appearance, deprived of life. Her lips were
" quite pale, her face resembled the counte-
" nance of a dead person, and her body grew
" cold.

" She was removed from the room in
" which she died, was laid in a coffin, and
" the day of her funeral was fixed on. The
" day arrived, and according to the custom
" of the country, funeral songs and hymns
" were sung before the door. Just as the
" people were about to nail on the lid of
" the coffin, a kind of perspiration was ob-
" served to appear on the surface of her body.

" It

" It grew greater every moment, and at laſt " a kind of convulſive motion was obſerved " in the hands and feet of the corpſe. A few " minutes after, during which time freſh ſigns " of returning life appeared, ſhe at once " opened her eyes, and uttered a moſt pitiable " ſhriek. Phyſicians were quickly procured, " and in the courſe of a few days ſhe was con- " ſiderably reſtored, and is probably alive at " this day.

" The deſcription which ſhe herſelf gave " of her ſituation is extremely remarkable, " and forms a curious and authentic addition " to Pſychology.

" She ſaid it ſeemed to her, as if in a dream, " that ſhe was really dead; yet ſhe was per- " fectly conſcious of all that happened around " her in this dreadful ſtate. She diſtinctly " heard her friends ſpeaking and lamenting " her death at the ſide of her coffin. She " felt them pull on the dead-clothes, and lay " her in it. This feeling produced a mental " anxiety which is indeſcribable. She tried

" to

"to cry, but her ſoul was without power, "and could not act on her body. She had "the contradictory feeling as if ſhe were "in her own body, and yet not in it, at one "and the ſame time. It was equally impoſſi- "ble for her to ſtretch out her arm, or to "open her eyes, as to cry, although ſhe con- "tinually endeavoured to do ſo. The inter- "nal anguiſh of her mind was, however, at "its utmoſt height when the funeral hymns "began to be ſung, and when the lid of the "coffin was about to be nailed on. The "thought that ſhe was be buried alive was the "firſt one which gave activity to her ſoul, and "cauſed it to operate on her corporeal frame."

The relation of the above fact is ſaid, by the gentleman who ſent the account of it to the editors of the Magazine, to have been obtained from the moſt reſpectable witneſſes. Independently of the reflections which muſt naturally ariſe in the mind of every intelligent phyſician, from the ſingularity of the caſe, there is an aweful warning to be drawn from it, which regards every perſon; I mean the

danger

danger which arifes from too early burials in the cafe of fudden, or unexpected death. This is a circumftance which has been often taken notice of, and which certainly receives additional intereft from fuch cafes as the one which has been juft mentioned.

No other difeafes can, in my opinion, be juftly deemed difeafes of volition. This declaration will probably excite furprife among the admirers of the Zoonomia, in which work all the fpafmodic and convulfive diforders are confidered by Dr. DARWIN as efforts of volition, and are ranked among the difeafes of this faculty. To me it appears that all the fpafmodic difeafes arife from phyfical ftimuli, applied either to the brain itfelf, or to diftant parts of the nervous fyftem, as in the cafe of worms, or acrid matters in the ftomach and inteftines, tumours, wounds, fractured bones, &c.; and, that the nervous impreffion of thefe ftimuli, fo far from exciting the will, counteracts its efforts, and repreffes, as it were, its action. The convulfions of epilepfy, and tetanus, for inftance, are not, in my opinion, voluntary actions

actions excited for the purpose of counteracting pleasure or pain, as Dr. DARWIN imagines, but are involuntary acts of the external muscles, produced by the transmission and irritation of a powerful and unusual nervous impression; and I therefore coincide with SAUVAGE, VOGEL, HOFFMAN, and CULLEN, and all former writers of repute, in considering these as diseases which ought properly to be called involuntary ones. It would require more time than what I deem at present consistent with the plan of this work, to place Dr. DARWIN's hypothesis in a proper point of view, and to shew the impropriety of his classification; perhaps this may be done at a future time.

BOOK III.

ON THE PASSIONS,

CONSIDERED AS CAUSES OF MENTAL DERANGEMENT,

AND ON THEIR MODIFICATIONS,

AND CORPOREAL EFFECTS.

Of all God's works which do this world adorne,
There is no one more fair and excellent
Than is man's body, bothe for poure and forme,
Whiles it is kept in ſober government;
But none than it more foule and indecent,
Diſtempered thro' miſrule and paſſions bace;
It grows a monſter, and incontinent
Doth loſe its dignity and native grace.
Behold who liſt both one and other in this place.

FAERY QUEEN, Book II. Canto ix. § i.

CHAPTER I.

ANALYSIS OF HUMAN ACTION, BEING AN INQUIRY INTO THE SOURCE OF THE PASSIONS.

In what circumstances the object of the physician and physiologist, when inquiring into the nature of the passions, differs from that of the metaphysician and moralist. Natural classification of all the involuntary as well as voluntary actions of man. All these actions arise from pleasurable or painful feelings. Classification of the painful feelings which urge us to the first class of voluntary actions. Enumeration of the pleasurable feelings which produce the same effect. Enumeration of the painful and pleasureable feelings which impel us to the second and third classes of voluntary actions. On the origin of desire and aversion. Definition of desire, and of aversion. Secondary desires. What kind of desires and aversions constitute passions. Difference between animal desires and aversions, and passions. Upon what principles do

do ideas beget paſſions? Digreſſion concerning mental pleaſure and pain. General character of theſe affections. The pleaſurable and painful feelings which ariſe from mental cauſes are corporeal feelings. They are felt at the præcordia. Why the heart is commonly conſidered as the agent of moral action. Claſſification of the ideas which create mental pleaſure. Claſſification of thoſe which cauſe mental pain. Origin of the motives of action. Difference between them and the involuntary phyſical effects of a paſſion. Emotions, what they are. Effects which the paſſions produce on the body. Effects which they produce on the mind.

MAN is not a ſelf-active being whoſe conduct depends intirely on impulſes which originate within himſelf. He has, indeed, many pleaſurable, as well as painful feelings, which impel him to commit various actions; and in reſpect to theſe he may be ſaid to contain within himſelf the ſecret ſprings of his own conduct; yet theſe are often excited by external cauſes, and he is alſo under the influence of other external circumſtances to which he either

either ſpontaneouſly, or elſe is forced to yield notwithſtanding his efforts to the contrary.

That no paſſion can ariſe without previous deſire or averſion, and that no deſire or averſion can occur without a previous feeling of pleaſure, or pain, are axioms the truth of which will be granted as ſoon as they are ſufficiently reflected on.

As all human action may be ſaid to ſpring at firſt from feelings of pleaſure or pain, and as theſe depend on our organization, as well as the agency of many external circumſtances, the plan which we muſt purſue in our endeavours to diſcover the ſource of the paſſions, is evidently pointed out. The more immediate objects of our preſent exiſtence muſt be conſtantly held in view, and our internal ſtructure and œconomy, by which the wants of animal life are to be obtained, muſt be fully underſtood, and all the ſources of painful and pleaſurable ſenſations well known before we can expect to make a ſucceſsful progreſs in

 ſuch

ſuch an obſcure and intricate branch of ſcientific inquiry.

It is, perhaps, owing to the very extenſive knowledge of phyſical, as well as moral facts, which is required in ſuch an inveſtigation, that ſo few ſatisfactory treatiſes have appeared on the origin of the paſſions, by thoſe who have principally treated of them.

Moraliſts and metaphyſicians have written copiouſly on the ſubject, but they have confined themſelves ſolely to the views of moraliſts and metaphyſicians, they have divided and ſubdivided it, and made inquiries concerning it, which are of no uſe whatever to a medical inquirer, except inaſmuch as he himſelf is concerned in the morals of the community he lives in.

The paſſions are to be conſidered, in a medical point of view, as a part of our conſtitution, which is to be examined with the eye of a natural hiſtorian, and the ſpirit and impartiality of a philoſopher. It is of no concern

cern in this work whether paſſions be eſteemed natural or unnatural, or moral or immoral affections. They are mere phenomena, the natural cauſes of which are to be inquired into; they produce conſtant effects on our corporeal frame, and change the ſtate of our health, ſometimes occaſioning dreadful diſtempers, ſometimes freeing us from them; theſe facts are to be carefully obſerved, examined, and enumerated. They produce beneficial and injurious effects on the faculties of the mind, ſometimes exalting them, ſometimes occaſioning temporary derangement, and permanent ruin: the progreſs to theſe different ſtates alſo deſerves ſerious conſideration.

The following reſearch, therefore, into this intereſting part of the animal œconomy, is meant to be general, in regard to the various circumſtances which conſpire to throw any light on the origin of the paſſions; but it muſt, from the nature of the preſent undertaking, be principally confined to a phyſiological and medical point of view. Were I to enter into a diſcuſſion of the moral effects of the paſſions, or of ſome of the more abſtract meta-

phyſical queſtions which are agitated concerning them, it would deſtroy the connection which they have with the preceding parts of this work.

Not only the involuntary, but alſo the voluntary actions which almoſt all animals have in common with each other, are directed to one or other of the three following objects; the preſervation of their own exiſtence; the propagation of the ſpecies; and the preſervation of the young offspring.

The *involuntary actions* which ſupport the exiſtence, and preſerve the life of individuals, are extremely numerous, and ariſe from the peculiar properties and powers of various organs; ſuch as the action of the ſtomach, and inteſtines; the action of the lacteals, and lymphatics, or the abſorbent ſyſtem; the action of the heart and arteries; the action of the veſſels which ſecrete the groſſer materials of our frame, ſuch as bony matter, muſcular fleſh, fat, cellular membrane, brain, nerves, membranes of various kinds, ligaments, &c. and alſo thoſe which ſecrete fluids to be abſorbed, or to be rejected, for inſtance, the ſaliva, pancreatic liquor,

liquor, bile, and urine; and to theſe may be added the action of the lungs, and the whole ſyſtem of glands.

The involuntary actions which are neceſſary to the propagation of the ſpecies are the action of the ſpermatic veſſels, the peculiar action in the teſticles, by which ſemen is ſecreted, and the particular action of the ovaria, by which the female rudiment of the fœtus is formed.

All the actions of the male parent which are conducive to the preſervation of the young offſpring, are voluntary ones, taking the expreſſion in a phyſiological light; but in the female parent an involuntary action commences as ſoon as the child is born, on the continuance and healthy ſtate of which, the life and well-being of the infant, in a great meaſure depends: I allude to the ſecretion of milk.

The greater number of the involuntary actions of man, as well as of other animals, is carried on without any conſciouſneſs of what is going forward. The various parts are endowed with a principle of action, called irritability,

irrritability, which is independent of mind, and by which they are thrown into their natural actions as long as the natural ſtimuli are regularly applied to them.

Although we have not any conſciouſneſs of the involuntary actions themſelves, while they continue in a ſtate of health, yet as the ſtimuli which ſupport them are all derived, directly or indirectly, from without us, and as theſe ſtimuli muſt be procured by voluntary exertions, ſo we are urged to obtain them by very powerful feelings. Theſe feelings conſtitute the great fountain from which a vaſt number not only of our deſires and averſions, but alſo our paſſions ariſe. They are of two kinds, being either pleaſurable, or painful; and it is a curious circumſtance in our œconomy, that we are generally urged not only by pleaſure, but alſo by pain, to ſuch actions as are neceſſary to the accompliſhment of any of the three great ends already enumerated. Let us proceed to enumerate theſe feelings, which give birth to what may properly be called primary deſires, and point out the paſſions which ariſe from them.

In

In doing this the reader muſt be ſatisfied with a mere detail, for it is impoſſible to enter into a complete hiſtory of them, without incroaching too much on the general phyſiology of the human body.

The feelings which give riſe to the deſires which impel us to the performance of ſuch actions as are neceſſary for our own preſervation, are of two kinds: they are either painful, or pleaſurable.

The painful ones, which are by far the moſt powerful, are

1ſt. The feeling of hunger,

2dly. The painful bodily anxiety which ariſes when our reſpiration is impeded, either by mechanical means, or by a privation of good air.

3dly. The uneaſy ſenſation of extreme heat or cold.

4thly. The uneaſy ſenſation ariſing from the retention of various matters which ought to be expelled the ſyſtem,

5thly. The pain of confinement, or want of exercise.

6thly. The pain of weariness and fatigue.

7thly. The pain of external injury, or internal disease.

By the first of these a man is impelled to all the actions of his life which have the supply of food for an object. These actions must necessarily be various, according to a great number of circumstances; for although all men have the same desire arising out of the same bodily feeling, yet the object is different in different countries, and the means of obtaining it are also various. The voluntary action, therefore, must be modified by climate, by the various articles of diet which that climate yields, by the person's living in a savage state, or in society, and by his being able to obtain it more easily in one way than another. Hence, the various contrivances and practices of hunting among the American, and African savages; the arts of fishing among the inhabitants of Groenland; the agricultural state of the mild Hindoos;

doos; the various profeſſions, and means of livelihood of men in civilized ſociety; and the robberies and depredations of the wandering Arab.

The ſecond kind of feeling neceſſarily excites man to ſelect a ſituation in which he can have a free ſupply of that element which he is obliged to breathe.

It cauſes him to give certain dimenſions, and forms, to his habitation, and forces him to remove many noxious bodies from its neighbourhood. The voluntary actions which ſpring from this deſire muſt, like thoſe which originate in the firſt, be greatly modified by local circumſtances, ſuch as the nature of the climate, the materials which it yields, &c.

The uneaſy feeling which ariſes from extremes of heat and cold, gives birth to the neceſſary arts and manufactures which ſupply mankind with cloathing, and with ſhelter againſt the ſeverities of the winter's cold, or the ſcorching heat of the ſun.

The

The fourth kind of feeling excites desires, the voluntary actions of which are very much the same in all men, and certainly require no comment.

The fifth gives rise to desires which induce us to take a due quantity of exercise, and to strive against confinement.

The various arts and contrivances which render sleep and rest more comfortable and secure, arise from the sixth.

The seventh gives birth to the arts and actions of self-defence, and to those of avoiding many physical causes of injury to which we are constantly exposed. It is the parent of medicine and surgery.

The pleasurable stimuli by which man, as well as almost all animals, are excited to the same actions, are

1st. The pleasures which the various articles of food produce on the organs of taste.

2dly.

2dly. The pleaſure of breathing a pure atmoſphere.

3dly. The pleaſurable feeling of the ſkin from moderate warmth.

4thly. The pleaſure ariſing from the being relieved from matters which irritate when confined and pent up.

5thly. The pleaſure ariſing from various exerciſes.

6thly. Relief from wearineſs and pain.

The painful corporeal feelings, by which man, in common with other animals, is impelled to the propagation of the ſpecies, ariſe from the fullneſs and diſtenſion of the ſpermatic veſſels, eſpecially thoſe which form the epididemis. In the female ſex it ſeems to ariſe from ſome action in the ovaria. The pleaſurable feelings which act as additional motives for the voluntary actions which ariſe out of this deſire, are the gratifications which are experienced by the union of the ſexes.

It has been already obſerved, that man does not ſeem to be urged by any corporeal feelings to the preſervation of the offspring. In women, however, there is a very painful one ariſing from the diſtenſion of the breaſts, in the relieving themſelves from which they experience much pleaſure. It is on this account that the love which the mother has for the young offspring is, in general, much greater than that of the male parent.

It is ſurely needleſs to obſerve after what has been already ſaid, that all the actions of the young animal ſpring from the ſame cauſes. A very ſlight examination of theſe muſt convince us of the truth of this aſſertion. "Omne "animal, ſimul atque natum ſit, voluptatem "appetere, eaque gaudere ut ſummo bono: "dolorem aſpernari ut ſummum malum, et, "quantum poſſit, a ſe repellere." EPICURUS, ap. Ciceron. de finibus, lib. I.

If one could ſuppoſe a ſociety of men ſo ſituated in this habitable world, that theſe various feelings could be eaſily gratified, either by

by the poſſeſſion of what was pleaſurable, or the removal of what was painful, there would be reaſon to conclude that human life would be uniformly ſerene and peaceful, and free from many paſſions which ariſe from the impediments which are placed in the way of our natural wants.

The law of this world, however, is, that man muſt procure his food by the ſweat of his brow. Obſtacles have been placed between him and the objects of his moſt natural deſires, in order to urge him to the active employment of thoſe faculties, on the perfection of which, our future happineſs, moſt probably, depends. Many of theſe obſtacles ariſe out of the natural conſtruction of the globe itſelf, many others are owing to the artificial conſtitution of the ſociety in which we live; and hence many new and powerful feelings which agitate the human frame.

ON THE ORIGIN AND NATURE OF DESIRE, AND AVERSION; AND ON THE ORIGIN OF PASSION.

WHEN a perſon is deprived of food, of reſt, of exerciſe, of a companion of the oppoſite ſex, or of any thing which is neceſſary, either for his own preſervation, or that of his young offspring, the painful, or uneaſy ſenſation that accompanies ſuch wants, brings into his mind, or to uſe the common expreſſion, cauſes him to think of the objects by which ſuch feelings are to be relieved. He then *deſires* to poſſeſs them.

We often foreſee a number of impediments which are placed in the way of our deſires, and we are affected with a diſagreeable feeling in conſequence of this foreſight; to this we give the name of *averſion*.

That there cannot be any deſire or averſion without foreſight, is an axiom which is laid down

down by many writers; an axiom, the truth of which will become clearer the more closely we examine the passions apart from each other; and which therefore will be elucidated in the following chapters of this book.

In every desire we foresee an agreeable something (the cause of some pleasurable sensation, or mental perception, or both), which by a constant and powerful effort of the mind we endeavour to realize.

In every species of aversion we foresee a disagreeable something (the cause of some painful sensation, or mental perception, or both), which, by an effort of mind, we endeavour to avert from us, or, in other words, we endeavour to realize an opposite sensation.

The effort of the mind employed in desire and aversion, of which every person is conscious, will be found, if narrowly examined, to be a strong effort of attention. By it, the idea of the thing desired is retained to the almost total exclusion of every other one, and by this means the objects of our desires and aversions often

often acquire an amazing degree of vividneſs and ſtrength, conſidering them as mental ſtimuli.

The bodily effects of our deſires and averſions are naturally produced by the elements of which they are compoſed. They ariſe in the firſt place from the object foreſeen, and in the ſecond place, from the exertion of attention employed. The corporeal effects which the object foreſeen produces, are exactly ſimilar in kind to what the real object would have produced on our frame; the only difference is that they are weaker in degree.

When our animal deſires and averſions are oppoſed, or not gratified, new deſires and averſions ariſe, which are attended with painful and pleaſurable feelings, that are totally diſtinct from thoſe which gave birth to the primary deſire or averſion. The feelings which accompany theſe are felt about the præcordia, and are, at times, of ſuch a powerful nature as often to deſtroy all the operations of cool reaſon, and to throw the human frame into the moſt violent agitation and diſorder. Theſe new

new desires and aversions thus characterized by pleasurable or powerful feelings at the præcordia are called passions.

Animal desires and aversions are distinguished from passions, in the first place, by a difference in the seat of the corporeal feelings. The feelings which accompany the former are only felt in those parts of the body where the uneasy sensation that gives rise to the desire exists; the desire of food is attended with an uneasy sensation in the stomach, called hunger; the desire of drink is attended with an uneasy sensation in the mouth and throat, called thirst; the desire of repose, with an universal pain, or uneasiness throughout the whole frame, called weariness; but, however violent these desires may be, they never produce the peculiar feelings of any passion. They may, indeed, give birth to passion, in an indirect manner, and then the peculiar feelings at the præcordia are felt; if, for instance, a person is long deprived of food or drink, the circumstance may excite the passion called fear: or if he is deprived of it by the violence of another

perſon, it may excite the paſſion of anger, &c.; in all which caſes it is evident that the mere animal deſire operates in an indirect manner.

In the next place, all the deſires and averſions which are called paſſions are diſtinguiſhed from mere animal deſires by the clearneſs of the object foreſeen, and by the object foreſeen being both the one which gave riſe to the paſſion, and alſo the one againſt which, or towards which, all the voluntary actions that ariſe in the paſſion are directed. A perſon who excites in us the paſſions of anger, fear, love, friendſhip, or charity, &c. is at once the cauſe and the object of our anger, fear, love, friendſhip, or charity; but the exciting cauſe of animal deſire is always an obſcure feeling, and quite diſtinct from the object againſt which, or towards which our will is directed.

Before we proceed any further, let it be remarked that the word *emotion* is often uſed, not only in converſation, but alſo in philoſophical

phical works, as an equivalent expreſſion for paſſion. At other times it is intended to denote the diſorder which prevails in the mind, and at others, the corporeal feelings about the præcordia, which are alſo often called feelings of the heart.

It is well known that the ſame paſſions may ariſe from a mental cauſe, as well as a corporeal one. Thus grief and anger may ariſe not only from perſonal pain, but from ideal pain. Many paſſions, indeed, ariſe ſolely from mental cauſes, as piety, charity, benevolence, &c.

Now a curious queſtion occurs in conſequence of this obſervation: Upon what principle do ideas beget paſſions? There is no intrinſic quality in the word *honor*, which ought materially to affect any one; yet we ſee that it ſhall rouſe a man to ſuch a ſtate of paſſion as to make him forgetful of one of the moſt powerful animal inſtincts, that of ſelf-preſervation; and in the indulging of which paſſion he often foreſees certain death.

If paſſions ariſe from abſtract ideas, as well as from the feelings which accompany animal deſires and averſions, there muſt be a common principle on which they operate. It is worth while to inveſtigate this matter before we ſpeak of the general effects of the paſſions.

ON

MENTAL PLEASURE AND PAIN,

AS ANOTHER GENERAL SOURCE OF PASSION.

IT has been eſtabliſhed as an incontrovertible truth, that a great many of our pleaſures and pains are by no means to be conſidered as the property of mind. It has been proved that they belong to our corporeal frame; that they take their origin in our nerves, and are felt in them alone; and it has been added, that the nervous feeling ought, in philoſophical language, to be accurately diſtinguiſhed from the conſciouſneſs we have of ſuch an affection.

Corporeal

Corporeal pleaſure, and pain, always originate from phyſical cauſes, acting immediately on the nerves; ſuch, for inſtance, as the pleaſure of gentle friction, moderate warmth, a certain degree of light, variety, and concordance of ſound, and certain impreſſions on the organs of taſte, and ſmell; blows, cuts, burns, lacerations, and the pain from the corroſion of chemical agents, from the ſharp and acrid ſanies of bad ſores, &c. But the pleaſures and pains which are to be treated of at preſent, may be properly ſaid to be mental, inaſmuch as they do not ariſe from what are commonly conſidered as phyſical cauſes, but from moral or intellectual ones; I mean ideas. They are either ideas which are forced upon us by external objects, or by a train of aſſociated ideas, or they are the immediate production of our own fancy, or of our taſte and learning; and at other times, they are ideas which are the offſpring of the fancy, taſte, and learning of others.

Thoſe ideas are pleaſurable which the mind loves, as it were, to dwell on, and which it

is

is anxious to retain for a certain length of time.

Thoſe ideas are painful which occaſion the ſentiments of diſguſt, averſion, or diſtreſs of any kind. The proſpect of attaining one's wiſhes; the conſideration of the advantages which we expect to derive from them, after they are attained; the train of ideas which ſucceed each other in a lover's mind, on receiving a kind letter from his miſtreſs; the reflections which ſucceed acts of benevolence; every gay inſpiration of fancy, and every pleaſant ſport of imagination, are circumſtances which the mind dwells on with delight; which it quits with regret, and which, if ſuddenly deprived of, it ſtrives to recal. The proſpect of ſome impending evil, the diſappointment of a long-expected wiſh, the reflection ariſing from acts of ingratitude ſhewn towards us; the conſciouſneſs of our inability to relieve the diſtreſſes of a dear friend, or a perſon we tenderly love, are ſentiments which occaſion the feelings called diſtreſs, and from which we are glad to be relieved.

So

So far are these pleasures and pains mental; but no farther; for the pleasurable and painful feelings which arise from mental causes, are not felt in the mind but in the body; they undulate about the heart, and breast, producing great and remarkable physical changes there; the influence of which is often extended throughout the vascular and nervous parts of our whole frame.

In a moral sense, nothing can be purer, or less sensual than the approbation of a guiltless conscience, the endearments of friendship, the pleasures arising from the recital of all kind, generous, noble, and benevolent actions; and the praise of honest men; but in a philosophical light, objects must be viewed in a different manner from what they are in a moral one.

The internal gratifications, and uneasinesses, which we call mental, are all felt about the præcordia; and strictly speaking, therefore, are sensual. It would appear that the sensorial impressions, which all ideas belonging to these causes produce, are communicated by a necessary law of our œconomy to these parts, affecting

affecting particularly the heart, diaphragm, and organs of respiration. It is there that the pleasure or pain is experienced; nothing can be a more convincing proof of this than the common expressions and actions of mankind when under the influence of one or other of these feelings. *Our heart,* we say, *is relieved from a load; it is light; it jumps for joy; it is oppressed; it is full; it is ready to break; it is touched with sorrow;* and when a good actor means to convey to an audience the feelings which such emotions produce, it is not to his head, the seat of mind, that he applies his hands, but to his chest, which, if he be under the influence of internal pleasure, he compresses with both his hands, and with an expression of satisfaction; or, on the contrary, if he be distressed, he beats it as if for the anguish it makes him suffer.

As the heart is supposed by the generality of mankind to be seated where we experience the feelings of mental pleasure and pain; and as these pleasures and pains enter more or less into the composition of all our passions, we see

ſee the reaſon of other remarkable actions, and modes of expreſſion of men. That organ, the heart, which ought rather to be conſidered as a great ſufferer in our paſſions, is commonly regarded as the ſource of moral action. Such a man is ſaid to have a good or bad heart; and when certain ſavages mean to ſatiate their revenge to the utmoſt, they are not content with killing their adverſary, but tear out the heart, as the great object of their hatred, and gnaw it, or drink its blood; and if we were to judge, from the nature of ſome Engliſh oaths, a barbarian of this country would do the ſame thing, did not his perſonal fears prevent him.

The ſource of all theſe deeds, and expreſſions, therefore, evidently lies in the corporeal ſenſation, communicated to the præcordia, and neighbouring parts, from the brain, in conſequence of the ſenſorial impreſſions made on it by the ideas; a circumſtance curious in itſelf, and which I hope juſtifies the digreſſion which has been made.

The

The ideas that are fitted to produce mental ſatisfaction, and uneaſineſs, are ſo numerous, and of ſuch variety, that it is impoſſible to aſcertain their number; and indeed there is an obſtacle independently of this, which renders ſuch an attempt impracticable, I mean, that the ſame ſet of ideas ſeldom affect all mankind alike; for the diſpoſitions of men in this reſpect are ſo various, that ſome are hardly rouſed from a ſtate of indifference, when others experience conſiderable pleaſure, or uneaſineſs.

The cauſe of this variety in the different feelings which men have for intellectual pleaſures, and pains, is a very curious ſubject of inquiry, and one well worth the attention of philoſophers, ſince its ſolution evidently leads to a diſcovery of the cauſes of that aſtoniſhing difference in the taſtes, ſympathies, and certain purſuits which we obſerve among them.

In ſome people it evidently ariſes from the original conſtitution of their nerves, including the occult cauſe of this energy, whatever that may be.

A very

A very ſtriking circumſtance which relates to this inquiry is, that people who are endowed with much phyſical, or nervous ſenſibility, are, for the moſt part alſo, more powerfully affected by mental pleaſures and pains, than the phlegmatic race, whoſe nerves are only made to feel by means of ſtrong impreſſions.

Whether this difference which we obſerve in the corporeal ſenſibility of men, ariſes from a difference in the ſtructure of the nerves, or in the ſecretion of the nervous fluid, is a queſtion which cannot be decided for want of abſolute proof, as has already been taken notice of in the chapter on Senſation.

I proceed to the conſideration of other queſtions intimately connected with the preſent ſubject, but which from their very abſtract nature, and from bordering too much on ſpeculative philoſophy, muſt be diſmiſſed in an unfiniſhed ſtate.

Upon taking a general and comprehenſive view of all the ideas which create mental pleaſure,

ſure, it appears that they all belong to the two following claſſes:

1ſt. Such ideas as repreſent the pleaſures of the ſenſes.

2dly. Such objects and thoughts as are actually conducive to our well-being and happineſs, or thoſe which are eſteemed ſuch by us.

Mental pain on the other hand ariſes from

1ſt. Such ideas as repreſent the pains of the body.

2dly. Such objects and thoughts as are actually deſtructive of our peace and happineſs, or ſuch as are conſidered in this light by us.

Many of theſe cauſes awaken deſire, or averſion, in a direct manner, that is by immediately preſenting to our minds the objects of our deſire or averſion; whereas, others do ſo in an indirect manner, that is, through the medium

medium of ſome of the mental faculties. Hence it follows that we have pleaſures and pains ariſing from acts of memory, of imagination, and of judgment. Theſe will be examined afterwards, in the chapters on Joy and Grief.

Having now traced the origin of human paſſions, to a few general principles, and having pointed out the diſtinction between them and animal deſire and averſion, we proceed to take a view of their effects on the mind and body, and to ſhew which of them tends to produce mental diſorder, and how they do this.

GENERAL EFFECTS OF THE PASSIONS.

THE emotions of our mind which ariſe from the deſire, or averſion peculiar to each paſſion, generally terminate in a ſpecies of judgment,

judgment, which forms the *motive* of the voluntary actions that take place, and which actions constitute the moral effects of the passion. The emotions of the mind, on the other hand, or thoughts which arise in our mind from the immediate perception, or foresight of the object which causes the passion, produce sensorial impressions which are sent, independently of volition, to various parts of our frame, and throw them into more or less disorder. These may be said to be the animal effects of the passion. A single instance is sufficient to elucidate this position.

Consider the actions of a person surprized by some object of terror. Suppose, for instance, a traveller coming suddenly upon, and alarming an hungry and ferocious animal, such as a tyger, or lion. The voluntary actions of this person would be various, according to circumstances, that is, they would be varied by his local situation, by the danger he foresees, and by his avoiding or preventing it. If he were sufficiently armed he would probably put himself in

a poſture of defence; if not, he would uſe ſtratagem, or attempt to fly.

Theſe determinations of his are ſo many judgments, in which the crowd of thoughts, which at firſt ruſh into his mind, terminate. They may or may not take place, according to circumſtances; but whether they do or not, the animal, or involuntary effects, ariſing from the ſudden perception of the objects of the paſſion, are conſtantly the ſame, provided the perſon conſiders the object as an object of terror. His heart is thrown into greater and more violent action than uſual; but the arterial ſyſtem, ſo far from correſponding with it in a general ſenſe, is either rendered torpid at its extremities, or elſe is affected with a ſpaſm. A ſudden paleneſs ſpreads itſelf over his countenance, his lips loſe the coral tint, and the whole body of the man ſeems to ſhrink into a ſmaller compaſs; a tremor agitates his whole frame, and he feels as if he had ſuffered a great diminution of ſtrength. Such are a few of the effects of ſudden terror, and they are conſtant and involuntary,

voluntary, and the only variety they ſuffer is in degree, or duration. The cauſes why they vary in force and duration ſhall be inquired into afterwards.

Now as the effects of any particular paſſion on the organs of involuntary action differ in degree only, it is evident that their exciting cauſe alſo differs only in this reſpect; and as the effects of the paſſion on the will are different, not only in different people, but in the ſame perſon according as he is placed in different circumſtances, it appears evident that paſſion is a very complicated affection. The corporeal effects of paſſion ariſe from the ſenſorial impreſſions of the object foreſeen, from the pain or pleaſure which excite volition, from the ſtraining of attention, and alſo from the voluntary acts.

Many of the pleaſurable or painful ſenſorial impreſſions are ſent to the præcordia. Theſe, in common language, are generally called emotions. When they are powerful, they withdraw the attention of the perſon from all

all objects except those which are more immediately connected with the passion, and in consequence of doing so, destroy, in a remarkable degree, the operations of reason. For what does the expression, to be actuated by reason, mean, as applied to our actions? Is it not the possessing the power of attention in such a degree as to be able to compare, with each other, the ultimate effects which our actions may produce, not only on ourselves but also on that of every other person, and every thing with which they are in any way related, and to regulate our conduct accordingly. He who can take the most comprehensive view of these various objects of thoughts, and can regulate his actions accordingly, will always appear to be the most reasonable, as well as the wisest man. But this operation of human understanding requires, not only, an attentive examination of each idea, but also an easy transition of attention from one subject of thought to another; events totally incompatible with passion, in which one powerful idea is constantly present, and in which our attention is also fixed by our corporeal feelings.

When that degree of attention which is neceſſary for every act of judgment, is ſo much weakened as not to be capable of reſtraining the flow of ideas, and directing them in a certain channel, imagination then takes the lead, and a croud of images, connected with the prevailing thoughts, offer themſelves ſpontaneouſly, as it were, to the mind. In this way our deſires and averſions are greatly heightened, and our hopes and fears, anger, jealouſy, love, hatred, and envy, conſiderably augmented. Now, conſidering all ideas as ſtimuli, it may eaſily be conceived how much volition muſt be excited by motives, the force of which is ſo much increaſed beyond the common ſtandard. Doubtleſs, theſe are much modified by education, habit, age, ſex, temperament, and climate. Hence it follows, that except we are perfectly acquainted with the mental character of a perſon, it is impoſſible to predict with any degree of certainty, how he will act when under the influence of any particular paſſion; and even then it is hardly poſſible to do ſo, as he may not foreſee all the accidental circumſtances which have an influence

influence on his actions at the time he is under the paſſion. To illuſtrate theſe obſervations, let us dwell a little longer on the caſe already mentioned.

As ſoon as the ſight of the dangerous animal meets the eyes of the perſon who has rouſed him, his firſt actions, whoever he be, are generally thoſe which accompany the inſtinctive impulſe of ſelf-preſervation; he ſhrinks back, and his hands are brought more or leſs forward. This action is performed ſo quickly that it ſeems to be totally independent of volition, and by many, indeed, it is commonly called an involuntary act. It is called ſo becauſe we are not conſcious of the motive which impells us to act; and we are not conſcious of the motive, becauſe no reflection, or compariſon has preceded it. It is in general, however, ſoon checked by a new chain of ideas, and by many acts of judgment. I ſay in general; for it happens, now and then, when the whole play of the mental faculties, as it were, are deſtroyed by the impreſſion of the dreadful object, and no poſſibility of eſ-

cape appears, that volition being then without a ſtimulus, a perſon drops down on the earth as if ſuddenly bereft of all his animal powers. But when reflection takes place, numberleſs ideas crowd into the mind, all of which are connected, however, with the deſire of ſelf-preſervation. He menaces, or careſſes, he flies, or ſtands ſtill, he attacks, or uſes ſtratagem, according to the quick judgments he forms of his ſituation, and of the nature of the animal, and of his means of defence or eſcape. Now, it is probable, that no two men would form exactly the ſame judgment in ſimilar ſituations; for the notions which have been inſtilled into our minds by education, by ſex alſo, and by temperament; by our habits, and nervous idioſyncraſy, will always modify them.

It would form a moſt intereſting part of the hiſtory of human actions, if a very comprehenſive view were taken of thoſe ſubjects, and if they were philoſophically examined as ſo many cauſes which modify the voluntary acts of

of the paſſions; for in this caſe ſome general principles might be detected, which would enable us to foretel, with certainty, how any man would act when under the influence of any paſſion, and when under ſuch circumſtances and ſituation as ſhould be known. In this work inquiry is inadmiſſible, ſince the moral effects of the paſſions throw no light on the diſeaſes of the mind.

One of the moſt remarkable, among the multitude of general effects, which the paſſions produce on the corporeal part of our ſyſtem, is a change of temperature. All thoſe which ariſe from ſtrong deſire, increaſe the heat of the body; and thoſe which are the offspring of averſion, occaſion ſudden chills, and often a ſenſation of intenſe cold. Theſe effects evince great changes in the ſanguiferous ſyſtem; for whenever heat is evolved in greater or leſſer quantity than uſual, it is generally found to correſpond with an increaſed or diminiſhed circulation.

That

That the ſanguiferous ſyſtem does ſuſtain great and ſudden changes from the influence of the paſſions, is a fact which common obſervation is ſufficient to prove. In all thoſe which are the offspring of deſire, it is accelerated; and in all thoſe which ſpring from averſion it is ſlower. In ſudden joy, in eager hope, in the expectations of love, in the endearments of friendſhip, the pulſe beats quick, the face glows, and the eyes gliſten: in grief and ſorrow, extreme anger, hatred, jealouſy, and envy, the blood ſtagnates about the heart, a chilling cold ſpreads itſelf over the whole ſurface of the body, the blood forſakes the cheeks, and a tremor enſues.

It is by no means eaſy to aſſign even a plauſible reaſon for the production of theſe phenomena. It has been proved (ſee chapter on the Mind) that a difference in the phyſical properties of bodies always implies a difference in the mixture of the elementary parts of which they are compoſed. If a body gradually exhibits a ſeries of phenomena which are not natural to it, it is a preſumptive proof either that

that the mechanical attraction, or the chemical compoſition of the body, is undergoing ſome phyſical change. It has been proved that all phyſical and chemical ſtimuli derange the organization of parts to which they are applied, (ſee chapter on Irritability,) and it is probable that the motion of irritable bodies which ariſe from the action of phyſical ſtimuli, is nothing elſe than the re-arrangement of the elementary particles. Now, if the heat of the body depends for its ſteadineſs of temperature on a certain permanency in the proportion and number of the elements, of which the blood is compoſed, as well as on the compoſition of the air which we breathe, as every experiment which has yet been made on the ſubject tends to prove, it follows, that whenever ſuch phyſical cauſes are applied, as change either in a direct or indirect manner, the compoſition of the blood, the temperature of the body will undergo correſponding changes. The action which the ideas produce on the nervous principle is a phyſical effect; the ſenſorial impreſſions which are excited by them are to be conſidered as much a mechanical derangement

rangement of the fine particles of which it is compoſed, as if the impreſſions had ariſen from a ſolid body applied to ſome of the nerves of our ſkin; but as all nervous impreſſions act on the heart and arteries, and other irritable parts of our frame, as ſo many ſtimuli, and as it has been proved that all ſtimuli irritate, either by actually deranging for a time the organization of the irritable part to which they are applied, and as every change in the action of blood-veſſels, conſidered as irritable parts, produces a correſponding change in the ſtate of the fluids, we therefore ſee the concatenated ſeries of cauſes and effects which are interpoſed between the action of ideas, and the fluſhes of heat and cold, which many of them occaſion. The particular ideas which give birth to ſuch phenomena have been defined in the diſſertation on corporeal and on mental pleaſure and pain.

Although all the nerves of the human body are ſimilar in ſtructure, as far as relates to the coarſer ingredients of which they are compoſed, yet, as we find from experience that they do

do not all convey ſimilar impreſſions; this gives riſe to the ſuſpicion that the fine matter which is ſecreted in them, and which ſurrounds the medullary particles to which we have given the name of ſentient principle, is a little different in each nerve. Now this ſuppoſition explains, in a certain degree, why ſome ſenſorial impreſſions, no matter whether the continuation of external nervous ones, or thoſe which immediately ariſe from a chain of aſſociated ideas, act on one claſs of nerves rather than another; and this accordingly explains why every paſſion affects one part of our corporeal frame more than another; for as ſome ideas are to be conceived as being ſtimuli which are better adapted to act on one ſet of nerves rather than another, their ultimate corporeal effects muſt neceſſarily be determined more to thoſe irritable organs of our body which are ſupplied by ſuch nerves rather than to others. Fear is apt to occaſion a diarrhœa and incontinence of urine; anger affects the functions of the liver; grief diſorders the ſtomach, and affects the lachrymal gland; ſudden terror, when without hope, produces an almoſt

almoſt complete palſy ; and hope itſelf, when the attainment of the object is near, affects the organs of reſpiration, and cauſes a quick and powerful diſtribution of blood throughout the whole body.

It has been remarked, that all deſires and averſions, and conſequently all our paſſions, are attended with pleaſurable or painful feelings at the præcordia. It remains to be obſerved, that many of theſe have a very remarkable reflex action on the mind.

They are to be conſidered independently of their origin, as ſo many caſes of corporeal pleaſure or pain, the impreſſions of which are tranſmitted to the brain.

The corporeal pleaſure or pain which accompanies our paſſions, always tend to diſengage attention from objects of abſtract thought, and they conſequently tend to deſtroy the reſtraint which the mind muſt be kept in while exerciſing the operation of judgment. Hence the will yields to other deſires and averſions which ariſe from the corporeal ſenſations, and is

often

often thrown into the moſt violent and ungovernable excitement. The voluntary actions of a perſon, therefore, who is under the influence of a ſtrong paſſion, is, in this reſpect, like thoſe of a maniac.

When the ſenſorial impreſſions, which ariſe from the primary deſire, or averſion, that give birth to the paſſion, and thoſe which ariſe from the corporeal pleaſure or pain felt at the præcordia are violent, they act on the brain in the ſame manner as the phyſical ſtimuli mentioned in the chapter on Delirium; and they conſequently induce this ſtate of mind, and become common exciting cauſes of inſanity. If there be a ſtrong hereditary prediſpoſition, the delirium often continues for a conſiderable length of time; if there be no prediſpoſition, it generally ſubſides very ſoon; but if the exciting paſſion be often renewed, a prediſpoſition ſeems now and then to be accidentally formed, and thus, in thoſe who have no original or hereditary taint, downright inſanity may ariſe from violent paſſions; a fact which now remains to be proved by particular inſtances.

CHAP.

CHAPTER II.

ON JOY, ITS MODIFICATIONS, AND EFFECTS; BEING A CONTINUATION OF THE SUBJECT OF MENTAL PLEASURE.

Mental pleafures differ in intenfity, and in their caufes. Expreffions by which we diftinguifh the various degrees of mental pleafure. Expreffions by which we denote a variety in their caufes. The fources from which the ideas that give birth to the various kinds of joy, enumerated, and examined. Upon what principle works of fcience, and abftract truth give pleafure. Divifion of the pleafurable paffions into two claffes: their character. The phenomena of laughing and leaping for joy accounted for. The various caufes of laughter claffed, and the general principles on which they produce their effects explained. The phyfical effects of joyful ideas. How it acts on the fyftem at large. The nature of the various fubordinate changes which it produces defcribed, and accounted for. The effects of

of joy on the mind. Its effects on attention, memory, imagination, and judgment. In what way various pleaſurable ideas beget inſanity. Of the effects of vanity and pride. The corporeal effects of ſtrong and ſudden joy. Upon what principle it produces epilepſy, fainting, and death itſelf.

THE various mental pleaſures which man experiences, differ more from each other, in their cauſes, and their intenſity, than in their general influence on the mind or body. We employ a few terms to denote the different degrees of mental enjoyment which we experience, and we alſo diſtinguiſh, by means of different appellations, the different kinds of joy that ariſe from different objects or cauſes; and hence we are apt to conclude, that there are a variety of pleaſurable paſſions. The words *inward ſatisfaction, delight, joy, ecſtaſy of pleaſure,* and *ſupreme bliſs,* are the chief expreſſions which we employ to denote the different degrees of mental pleaſure. The firſt ſignifies a much leſs degree of pleaſure than

than the ſecond, and the ſecond not ſo much as the third; and the third not ſo much as the fourth. A perſon is ſaid to be tranſported with joy, but not with ſatisfaction. Extreme delight produces emotions ſuperior to either.

An ecſtacy of pleaſure ſignifies a ſudden and powerful emotion, in which both mind and body ſeem to partake of the higheſt degree of enjoyment. If any higher degree of pleaſure than this can be imagined, it may well deſerve the name of *ſupreme bliſs*.

The objects which excite joyful emotions are various; and according to the variety of the objects, they produce diſtinct deſires, and conſequently diſtinct phenomena in the moral world. On this account moraliſts have conſidered ſuch modifications of joy as diſtinct paſſions; but in this work there is no neceſſity for ſpeaking of the moral qualities of theſe affections; and as the influence which the greateſt number of them have on the mind and body is very ſimilar, conſidered in a medical ſenſe, I ſhall treat of them in the aggregate.

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There is one, indeed, which, independently of its general effects, by which it is allied to the clafs of mental joys, has alfo effects peculiar to itfelf. Thefe entitle it to a particular confideration. The paffion alluded to is one to which we all willingly fubmit, and are fond of cherifhing; I mean love.

Joy, in its ftrict fenfe, is a term applied to denote a pleafurable feeling, or fatisfaction, arifing from fome prefent event.

When joy arifes in confequence of paft events or actions, it is called *content*, or *felf-fatisfaction*. When it arifes from the profpect of fome future good, it is called *hope*. The pleafure or joy we take in the welfare and happinefs of a perfon to whom we lie under obligations, and the confequent defire of promoting his welfare and happinefs, is called *gratitude*. The pleafurable or joyful feelings which arife in our breafts from the confcioufnefs of our being willing to affift the unfortunate, is called *compaffion*. The fympathetic pain which arifes

arifes from the diftrefs and fufferings of the objects of our compaffion, might probably juftify a perfon claffing compaffion with mental pain, or uneafinefs, or at leaft confidering it as a mixt paffion. The pleafure we feel from the idea we entertain of a perfon's fuperior qualities, is called *admiration*, and *regard*; that which we experience on account of his amiable qualities, *efteem*. The mixture of the fentiments of efteem, regard, and admiration, form the bafis of friendfhip, and what is called platonic love.

As the definitions which have been given of fome of thefe terms, may not appear fatisfactory to many on account of their concifenefs, it may be proper to dwell a little longer on them.

Content, and felf-fatisfaction, are fpecies of joy, both of which arife from paft events; and thefe events are almoft always the removal of mental or corporeal pain. Content may be faid to reign in the human breaft when the

pain

pain which has attended ſome ungratified deſire, or deſires, is removed. It has no reference to the cauſe of the removal: but *ſelf-ſatisfaction* denotes it's having been procured by ourſelves. When painful doubts which hung over us for ſome time, and which concerned our fortune, or our perſonal fate, are once removed, we experience the agreeable feelings of content. When a man of a generous turn of mind has done another an injury, he is not content until he has made due reparation for it; after he has done that, a ſecret pleaſure pervades his whole frame, to which we give the name of ſelf-ſatisfaction.

That hope conſiſts in an expected pleaſure, ariſing from the proſpect of ſome future good, ſcarcely ſtands in need of illuſtration. The criminal who is almoſt driven to deſpair by the diſcovery of his crimes, and the verdict of a jury, feels a lively, although a limited pleaſure, if through the wiſdom or lenity of the judge he is recommended to mercy; he hopes the recommendation will be attended to; and although he ſuffers a ſe-

cret dread from the uncertainty of his fate, it is not without a mixture of pleaſure, ſince there is a chance that he may be ſaved from the moſt fearful event to which human nature is expoſed. If he is reſpited, the proſpect brightens, and a greater degree of pleaſure fills his boſom.

It is ſaid by thoſe who have drawn haſty concluſions from a few facts ill obſerved, that gratitude ſprings from ſelfiſhneſs. What is that kind of ſelfiſhneſs which makes a man who has been ſhipwrecked, preſerve, with a kind of ſacred care, the raft on which he ſaved his life? As ſelf-preſervation is the moſt powerful inſtinct which animates his frame, and as every thing which contributes to it, gives him pleaſure, the ſight of the piece of wood recals to his mind both the danger he was in, and the means of his eſcape. It occaſions pleaſure upon the principle of the aſſociation of ideas: as an object of pleaſure he preſerves it, and ſo far it is connected with ſelf; but there is ſurely a great difference between this feeling and ſelfiſhneſs, as commonly

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and properly underſtood, which, were it the ſole ſource of his actions, would reduce him below the level of a beaſt. The pleaſure a perſon receives on ſeeing his benefactor, does not ariſe from the expectation of future ſervices he may render him, but the good he has already received from him. It may not be in his power to aſſiſt him any further; ſtill he loves him; he rejoices when he hears of his ſucceſs or happineſs; he is grieved at the misfortunes which happen to him; he hates his enemies; he loves his friends. A ſenſe of duty ought, indeed, to teach him not to hate any man's enemies, or love any man's friends, except they really merit ſuch ſentiments; gratitude, therefore, is not the offspring of reflection, or reaſon; but ſelfiſhneſs acts conſtantly on the ſame plan, and demands much reflection and thought: it would prompt a man to be ungrateful rather than grateful, becauſe he could oftener promote his intereſt by paying a cautious court to the enemies of his benefactor or friend, than by cheriſhing a diſlike againſt them.

That compaſſion, admiration, regard, and eſteem, are pleaſures which ariſe from the ſources to which they have been referred, requires no explanation, but the aſſertion will be illuſtrated by the inveſtigation of other cauſes of mental pleaſure.

In generalizing the principles on which all ideas, which create the feelings of mental pleaſure, act, it may be recollected, that they were ſaid to be two in number. 1ſt. Such ideas as repreſented the pleaſures of the ſenſes; or, 2dly. Such ideas and thoughts as contributed to, or were ſuppoſed to contribute to, our welfare and happineſs. Now theſe ideas may ſpring from various ſources; they may be yielded by external objects; they may be recalled; they may be created by an effort of imagination, or by judgment; and hence we find many authors, eſpecially poets, deſcribing the pleaſures of memory, imagination, and judgment. Memory is a ſource of joy when it recals the varied ſcenery of our early years; ſuch as the ſocieties and places in which our happieſt moments were ſpent; the ſports in which

which we excelled; and many innocent faults and follies which we committed. We recollect with pleasure, circumstances which formerly excited in our breast emotions of friendship, love, esteem, benevolence, and all the kind and smiling passions.

Most of the pleasures we derive from perusing works of taste, learning, and fancy, will also be found to resolve themselves into one or other of the two sources mentioned. HOMER's description of the girdle of Venus, and of the Elysian fields; MILTON's description of Eve; SPENSER's description of the residence of Acrasy, "where pleasure dwells in "sensual delights," are all gay pictures, in which the chief objects that gratify the senses are brought into the mind, and the sensorial impressions of which pervade our frame in the same manner as the impressions of the objects themselves, had they been real, would have done; the only difference being in degree.

There is a kind of mental pleasure which, if only slightly examined, might be supposed

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to depend on a diſtinct kind of principle from that which gives birth to joy; I mean that which men of ſcience derive from the peruſal of works of pure reaſon, or of works of ſcience when they are well executed. An algebraiſt, a mathematician, a natural philoſopher, all feel a ſecret pleaſure in the peruſal of works which either throw new light on the ſubject of their ſtudy, or which give a perſpicuous, full, and true account of the preſent ſtate of it. Can ſuch pleaſures be ſaid to belong either to the gratifications of ſenſe, or of paſſion?

The moſt abſtract of all ſubjects, the unadorned offspring of cool reaſon, if well treated, will afford pleaſure to a perſon who is ſufficiently acquainted with the ſcience to which it belongs. Of what kind is this pleaſure? I anſwer in few words, it is of a mixed kind: agreeable, pure, and laſting. It conſiſts, on the one hand, of ſentiments which ariſe from the ſenſe of a ſuperior degree of perfection of mind in another, to what we are accuſtomed to find in mankind; a ſpecies of

joy

joy to which we give the names of regard, admiration, and esteem. And, independently of these moral affections, it yields us real pleasure, inasmuch as it tends to satisfy one or more of the artificial wants which have arisen from our education, or pursuits in life; and for similar analogical reasons, the uneasiness we feel on reading an ill-written work, or in perusing some modern productions, in which ignorance and presumption are more evident than taste or learning, may all be referred to the class of mental pains.

Such are the terms by which we express the more remarkable varieties of the sources of mental pleasure; but surely it need not be remarked, that our pleasurable as well as painful feelings, are too numerous, and too variously modified, to be described by words. They are, at times, the result of the peculiar or constitutional susceptibility of feeling of our nerves; a susceptibility constantly changing by age, by education, by diet, climate, exercise, health, or disease; at other times they are the result of certain accidental situations in society,

ſociety, occaſioned by various relationſhips, connections, and unexpected occurrences of life.

All the pleaſurable paſſions may be uſefully divided by the phyſiologiſt into two claſſes, viz. the tranquil, or ſerene ones; and the lively or exhilarating ones; admiration, eſteem, regard, friendſhip, content, and compaſſion, are calm and ſerene; lively hope, mirth, gaiety, and the many nameleſs mental pleaſures, the quickneſs and violence of whoſe impulſe make us laugh, leap, and ſing, are lively and exhilarating.

The phenomena of laughing, and leaping for joy, only accompany that kind which we call mirth, and which, in a moral ſenſe, may ſaid to be the loweſt kind of joy.

No great or laſting pleaſure ever creates laughter; a fine picture, or ſtatue, the agreeable ſcenery of nature, the grandeur of the Alps, and Appenines; the pleaſures of eſteem, regard, friendſhip, and content, never cauſe us to laugh; a placid ſmile, indeed, is often produced

produced by these objects, but this is totally distinct from the convulsion of laughter.

This phenomenon almost always takes its origin from slight, transitory, and sudden occasions.

It appears to me, that the ideas which excite it, almost always owe their effect, on the one hand, to the suddenness and violence of their physical impulse on the brain, by which the internal nervous impressions are sent with force to the diaphragm, and other organs of respiration: and on the other hand, to something peculiar in the impressions themselves, corresponding with the mental perceptions which excite them. All moral causes which make us laugh, occasion a sudden transition from one series of ideas, to others which are not only dissimilar, but contradictory to the former. This kind of contradiction is either, 1st. A contradiction between words and their more obvious meanings, or, 2dly. A contradiction between the sentiment which the words convey, and certain peculiar modes of thinking.

3dly. It consists in actions which are contradictory, inasmuch as they are apt to occasion two very opposite emotions at one and the same moment of time. Instances of the first kind are frequently met with in puns, especially bad ones, or *jeux de mots*, lively repartees, anecdotes, and the history of certain equivocal toasts, that go round with the glass. Of the second kind are the adventures of Don Quixote, the relations of a Baron Munchausen; certain satyrical caricatures, and all extravagant but harmless exaggerations of truth. To the third class belong a vast variety of objects, such as the tricks and gestures of stage-fools, and clowns, in pantomimic entertainments, whose faces and gestures display the most sudden transitions from seriousness to a broad grin; from crying to laughter, from awkward-obsequiousness and ceremony, to excesses of familiarity, and disrespect; from terror and apprehension, to foolish intimacy and security. There are a number of other causes of laughter which are apparently of a very different nature, and, doubtless, of a singular kind, since, when they are considered abstractedly, they

they ought to produce a very different moral effect; but the ſuddeneſs with which the contradictory parts of theſe cauſes ſtrike us, produce a degree of irritation which is not to be withſtood. The misfortunes of others, even thoſe which are often attended with ſerious conſequences, are what are alluded to. We are all inclined to laugh when a perſon from inattention knocks his head againſt a poſt, or wall, or tumbles down awkwardly; what ſurprizes us much more is, that many (I am almoſt tempted to ſay moſt people) now and then have been inclined to laugh when a perſon has firſt begun to relate ſome misfortune which happened, either to himſelf or to another. Nay, a more unaccountable circumſtance of this kind is, that many people, when they have to tell us of the death of another perſon, feel themſelves often inclined to laugh at the moment when they firſt begin to ſpeak of it. It is by no means eaſy to diſcover the true explanation of this circumſtance, for it cannot be conceived to be owing to a want of ſenſibility, ſince it often happens to thoſe poſſeſſed of the moſt humane and feeling hearts. It

appears

appears to me to be more owing to the contradiction which exifts between the ideas prefent in the narrator's mind, and thofe which the face of the perfon, to whom he is about to relate the circumftance, awaken in him; or it may arife from the narrator's mind having been occupied the moment before with other thoughts of a very oppofite nature; for it never happens to any one who has been thinking ferioufly on the event for fome time before, and who is prepared to relate it. The reafon why moft people are inclined to laugh when a perfon firft begins to give fome melancholy account of himfelf, generally arifes from the ferious countenance, and grimace which he affumes on the occafion, and which, for the moft part, are in complete contradiction with our own feelings at the time; but as all ferious impreffions, when they are tranfmitted to mufcular parts, are to be confidered as phyfical ftimuli to them; and as a quick repetition of ftimuli produces a quick repetition of action, and unequal ftimuli produce unequal action, hence the laughter muft be excited, and neceffarily confifts in fhort, violent, and rapid con-

tractions

tractions of the diaphragm, interrupting the natural expiration, and preventing, for a considerable time, the taking in a fresh quantity of air, or of breath, to use the common expression.

It is evident, from what has been said, that laughter is, for the most part, an affection of the body, arising from certain thoughts which occur without the intervention of the will; that is, the thoughts which produce laughter do not necessarily excite volition; a person, indeed, may laugh voluntarily, inasmuch as he can voluntarily direct the impulses of this principle to the diaphragm and abdominal muscles: but as to leaping, dancing, and singing for joy, these, always, are to be considered as voluntary acts, although, indeed, we are not always conscious that they are so; for the suddenness and force of the impressions which excite them is so great, that no deliberation takes place.

The physical effect (sensorial impressions), which all joyful ideas produce on the brain, seems, then, to be that of a direct stimulus, not only to the whole of the nervous system, but also

alſo to the ſanguiferous one. Great joy often cauſes the heart to beat with ſuch force and velocity, that a violent palpitation enſues, which may be eaſily felt by applying the hand to the breaſt of the perſon who is under the influence of the gay emotion.

Although ſuch effects are not obſerved in weaker kinds of joy, yet the action of the heart is generally increaſed by it, from whatever cauſe it proceeds, as may be diſcovered from the increaſe of quickneſs in the pulſe, and from the increaſed luſtre of the eyes.

The heat of the body, and the various ſecretions and excretions, are known to correſpond, in general, with the action of the arterial ſyſtem, and hence we can eaſily conceive the truth of what Dr. Robinson * aſſerts, when he tells us that, from experiments made by him, both the heat of the body, and perſpiration, are conſiderably increaſed by joyful emotions.

* Robinson on Food.

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The aƈtion of the heart and arteries being increaſed, more blood than uſual is ſent into the muſcles, in common with all the other parts of our frame; and hence the feeling of increaſed vigour and aƈtivity which is experienced by people who are animated by joy. A greater quantity of blood is alſo ſent to the head, the face glows, the eyes ſparkle, the cryſtal tear ſtarts forward between the eyelaſhes, and a flood of tears often follows. Whether this uncommon flow of tears be owing to an increaſe of ſecretion, in conſequence of a peculiar determination of blood to the lachrymal gland, or whether it ariſes from the mere compreſſion of the muſcles of the eye on that body, or if both circumſtances conſpire to its produƈtion, I do not pretend to decide.

The increaſed aƈtion of the heart and arterial ſyſtem neceſſarily affeƈts the organs of reſpiration. A perſon under the influence of joy, therefore, breathes fuller and quicker than uſual, and the breaſt is ſaid to heave with pleaſure.

Although

Although the ſenſorial impreſſions of joy ſeem to be principally determined to the heart and ſanguiferous ſyſtem, yet its influence is extended to many other viſcera of our frame. Moderate and continued joy, mirth, and gaiety, all increaſe the healthy action of the ſtomach and inteſtines, and ſeem to augment the ſecretion of bile, pancreatic juice, and the activity of the abſorbent veſſels.

In fact, whatever increaſes in a moderate degree the action of the heart and arteries, muſt neceſſarily produce tonic effects on every viſcus, and on the whole of our frame. Every practitioner in phyſic muſt have repeatedly obſerved how much tranquillity and content of mind, affections which belong to the claſs of mental pleaſures, or joys, contribute to good health. This is more remarkably the caſe with thoſe who labour under chronic complaints of the ſtomach, liver, and inteſtines, occaſioned, or at leaſt kept up by various cauſes of mental inquietude; for as the ſerene and milder joys produce only a moderate increaſe of nervous excitement, and arterial action, they may, like

like all ſtimuli of moderate ſtrength, be continued for a long time, not only without inconvenience, but with great advantage in the cure of chronic complaints. Like wholeſome food, or exerciſe, in moderate quantity, they gently increaſe the action of the whole ſyſtem of veſſels, promoting abſorption of chyle, ſecretion of new ſolids, formation of blood, and the ejectment of uſeleſs and excrementitious matters. Hence, alſo, the good effects which muſic, and agreeable company, travelling, and the peruſal of many works of genius, have in various kinds of melancholy, hypochondriaſis, dyſpepſia, apepſia, chloroſis, hyſteria, and other chronic diſeaſes, in which languor and debility of body, and dejection of mind form a principal part.

Alexander Trallianus, lib. xli. p. 17. mentions a remarkable caſe of melancholy entirely cured by means of joy. In Pechlin, lib. iii. Obſ. 27. is to be found the caſe of a perſon, called Peyreske, who was cured of aphonia and palſy by reading ſome favourite agreeable authors; and one Conrineus relates the

the caſe of a man being cured of a tertian fever by the ſame means. LORRY, de Melancholia, Tom. I. p. 37. deſcribes the caſe of a perſon cured of a conſtriction of the pylorus, and inceſſant vomiting, by means of joy. In HELDANUS Obſ. Med. Chirurg. Cont. i. Obſ. 79. ELMULLER Opera, Tom. II. p. 11, and 95. various other ſimilar caſes occur.

It need hardly be remarked, that ſome people are much more diſpoſed to be affected by ſuch paſſions than others. People of a ſanguine temperament, and, of what is called a cheerful diſpoſition, have a ſtrong feeling for the emotions of pleaſure and joy, and as powerful an antipathy for all diſagreeable and painful ones. Their averſion for the laſt kind of paſſions, and ſtrong deſire for the firſt, although they diſpoſe them to become pleaſant and agreeable companions, continually expoſe them to the riſk of committing a number of moral tranſgreſſions; for the obſervance of our moral duties requires reſtraint, and a ſevere watch over ourſelves; painful habits to be gained, terrible

terrible conqueſts to be made, by one of a ſanguine temperament.

In regard to the effects which joy and its varieties have on the mind itſelf, I would obſerve, that it ſeems to diſpoſe all its faculties for eaſy and ready action, ſtimulating it, as it were, in the ſame way as it does the brain. When the mind is under the influence of pleaſure or joy, every taſk ſeems eaſy, every labour light. But let us take a ſeparate view of each of the faculties as affected by this general ſtate of mind.

Attention is employed with more energy, and ſeems to ſharpen all the ſenſes. People under the impreſſion of gaiety, and thoſe of a cheerful diſpoſition, hear and ſee with more than uſual quickneſs; their eyes are turned with celerity towards every object; their ears are open to every ſound, their actions are quicker, and all bodily feeling more acute than uſual. But attention, although exerted with more energy, is not exerciſed with conſtancy under the emotions of mirth and

 gaiety,

gaiety, as is proved by its effects on the memory, the faculty of the mind the most dependent on attention; for the objects that are thus examined, although they make a lively impression, are, yet, not long recollected. Bodies are not examined a sufficient length of time to be deeply fixed in the mind, and the remembrance of them, therefore, soon fades. The recollection, however, of past events, goes on easily under the impressions of joy, especially the recollecton of such things as are naturally associated with the thoughts which are present to the fancy.

Under the impressions of joyful emotions judgment is quick, but on that very account it is not always correct. In a man, however, who is naturally endowed with a correct judgment, I believe that its decisions are not only quicker, but also more accurate when he is animated by joy, than otherwise.

The imagination, taking it in its most comprehensive meaning, is the faculty of the mind the most affected by this passion, and its

various modifications; many gay ſcenes, thoughts, and actions, are again repreſented in the mind by the influence of this playful faculty; and fiction, taking its materials from paſt events, preſent circumſtances, future purſuits, and the expected gratification of new deſires, cheats the underſtanding with the view of many good and very deſirable proſpects, which, alas! are ſeldom realized. We build many delightful caſtles in the air, which vaniſh the moment they are conſtructed. Our fortune and fame are repreſented to us with all the brilliant ornaments of ſucceſs, and we lay the ſcheme of undertakings which are greatly above our ſtrength or power; we anticipate the pleaſure they are calculated to yield; the illuſion vaniſhes, and we are diſappointed; and thus the houſe of joy becomes the habitation of mourning and pain.

Of all pleaſurable paſſions, hope is the one which gives the greateſt exerciſe to the imagination, as is naturally to be ſuppoſed, its object being that of future expectation. Of all the pleaſurable paſſions it is the one which

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lays the foundation for the greateſt uneaſineſs, and mental injury; for as it is often more unreaſonable than reaſonable, we are expoſed to frequent cauſes of diſappointment and grief. This is particularly the caſe with the hopes attendant on vanity and pride, eſpecially when they have been fortuitouſly raiſed, or extravagantly flattered. The ſtate of pride, and the ſtate of vanity, are ſpecies of pleaſure, or mental gratification, founded on an erroneous judgment of a perſon's own ſuperiority to the reſt of mankind, or to a great number of men. This is a fixed and conſtant idea in the mind of thoſe who are under the influence of ſuch paſſions, and in the poſſeſſion of which they feel great pleaſure; but the hopes and expectations which are built on ſuch unreaſonable ideas of ſuperiority, neceſſarily expoſe a perſon to frequent and cruel diſappointments; and therefore the ſudden tranſitions from the eager hope of almoſt certain ſucceſs, to bitter diſappointment, from the gratifications of ſelf-love, to the pain of humiliation, give ſuch ſhocks to the mental fabric of men as ſeldom fail to reduce it to a ſtate of total ruin;

therefore,

therefore, pride and vanity are frequent caufes of infanity, efpecially with thofe who are not endowed with much fortitude, and refolution; more efpecially where judgment is weak. It is impoffible to enumerate all the different kinds of pride or vanity, which give birth to infanity. In every fociety, however, in which riches and family honour are confidered as circumftances that raife a man above the level of his fellow creatures, infanity muft frequently occur; and hence the reafon why we oftener find this difeafe arifing among men who have become fuddenly rich, and in titled families, efpecially new ones, particularly where a judicious education has not been inftituted, than among any other defcription of men. Every powerful idea, whether pleafurable, or the contrary, when too frequently prefented to the mind, tends to deftroy that fpecies of judgment which we call common fenfe; and by its direct operation on the brain to deftroy the healthy functions of that organ; and, independently of the mifchief which fuch powerful defire thus produces, another fource of mental mifchief arifes from the pain which follows

follows from the non-accomplishment of unreasonable wishes to which they gave birth.

The pride of riches, then, and of family distinction, and also all other kinds of pride whatever, without exception, such as that arising from power, from office, or from a notion of superior piety, may give birth to two very opposite kinds of insanity, I mean mania, and melancholy. The same thing may be said of vanity, and all its varieties: for when the notions which produce this passion are constantly present to the mind, a great train of imaginary happiness is produced, that increases until the person is, as it were, absolutely intoxicated. As often as these thoughts occur, the blood rushes with impetuosity to the head; the sentient principle is secreted in preternatural quantity, and the excitement is at last so often renewed, and increases to such a degree, as to occasion an impetuous and permanent delirium. But when the expectations, and high desires, which pride and vanity naturally suggest, are blasted; when these passions are assailed by poverty, neglect, contempt,

tempt, and hatred, and are unequal to the conteſt, they now and then terminate in deſpair, or in ſettled melancholy. The progreſs to theſe unhappy ſtates of human miſery will be deſcribed in the chapter on Grief. It may be remembered, however, at preſent, that the mania, and melancholy, which ſpring from pride and vanity, do not differ eſſentially from the mania and melancholy which ariſe from phyſical cauſes. Many authors conſider pride as the moſt frequent cauſe of inſanity; but, alas! it is only one of the frequent cauſes, many proofs of which have been already adduced, and many others follow.

As all ideas, productive of joy, and its modifications, act like direct ſtimuli to the nervous and irritable fibre, and as it is the eſſential property of all ſtrong ſtimuli quickly to exhauſt the principles on which the properties and energies of the living ſolids depend, we ſee the reaſon why exceſſive joy may become very prejudical to the functions of the body. It leaves a languor and laſſitude after it, like the effects of intoxication from ſtrong wine, or

or ſpirits; and in many caſes it has been known to exhauſt the two principles of life ſo much as to induce ſwooning and fainting. The debilitating effect of extreme joy was obſerved by SANCTORIUS, and by him aſcribed to a portion of the nervous fluid being forced out along with the perſpirable matter. Dr. PARSONS, in his Phyſiology, aſcribes it to the great determination of blood to the head, by which the heart and arteries are deprived of their uſual ſtimulus. If the ideas and their impreſſions, which originally excited the paſſion of joy, continue to act with great force, after a perſon is almoſt exhauſted by their firſt action, dreadful effects often enſue. I have known a temporary delirium ariſe from this cauſe. VAN SWIETEN, Tom. III. p. 414. mentions his having ſeen epilepſy produced in this manner; and the ſame thing is mentioned by his teacher BOERHAAVE, *de Morbis Nervorum*, lib. ix. cap. 12.

As all ſtimuli act more powerfully in proportion to the quantity of the principle called nervous energy, and the principle of irritability

lity redundant in the ſyſtem, and as ſorrow and grief, and what are called the depreſſing paſſions, allow theſe principles to be accumulated, we ſee one reaſon why ſudden tranſitions from extreme grief to extreme joy, are at all times dangerous, and often mortal. The caſe of the Roman matron, mentioned by LIVY, lib. xxii. and taken notice of in the chapter preceding the laſt, is a remarkable inſtance of this kind. Various other cauſes are mentioned by different authors. "In the "year 1544, the Jewiſh pirate, SINAMUS TAFFURUS, was lying in a port of the Red Sea, called Arſenoe, and was preparing for war, being then engaged in one with the Portugueſe. While he was there, he received the unexpected intelligence that his ſon, who in the ſiege of Tunis had been made priſoner by BARBAROSSA, and by him doomed to ſlavery, was ſuddenly ranſomed, and coming to his aid with ſeven ſhips, well armed: the joyful news was too much for him; he was immediately ſtruck as if with an apoplexy, and expired on the ſpot. Innumerable other inſtances of a ſimilar kind are to be met with, not only

only in modern but in ancient writers. The greater part of these are so well known to men of general reading, that I shall merely add a list of the authorities from which they are taken. VALERIUS MAXIMUS, lib. ix, cap. 12. relates the case of two women matrons who died of joy on seeing their sons return safe from battle at the lake Thrases. One died while embracing her son; the other was suddenly surprized by the sight of her son while she was deeply lamenting his death. In HALLER's Physiology, Vol. V. p. 581, several other cases, and their authorities, are stated; and in THORESBY's Natural History of Leeds, p. 625, there is another remarkable case.

CHAPTER III.

ON GRIEF, AND MELANCHOLY; THEIR MODIFICATIONS, AND EFFECTS.

Mental pain differs in degree as well as in the objects from which it springs; the different appellations by which these are distinguished from each other. General corporeal effects of grief and sorrow described. Inquiry into the origin and nature of sobbing and sighing. Examination of the general principle upon which grief produces its peculiar corporeal effects. How grief produces syncope. *What consequences ensue when this is violent or frequent. How deep grief often produces the phenomenon of sleep. How it terminates in confirmed melancholy. Difficulty of giving a good historical account of melancholy. Description of the origin and progress of melancholy. Its progress to suicide described. The nature of despair examined. How* tædium vitæ *occasions murder. The effects of religious melancholy; a case. How despair*

despair may cause the murder of an object of affection. When melancholy arises from particular causes, it is often considered as a distinct kind of insanity. Transition from melancholy to fury. How far the notion of predisposition is to be embraced in order to understand the nature of melancholy. Marks of predisposition to melancholy. The predisposition may either be born with a person, or accidentally excited. In what manner it is excited.

MENTAL pain, like mental pleasure, receives different appellations, according as it differs in degree of violence; or as it springs from different causes.

As the scale of unhappiness, which reaches from the first sensations of distress to the very height of despair, is uninterrupted; as there are no exact limits by which greater or lesser degrees of mental pain are to be accurately distinguished from each other, the terms we employ to denote them must necessarily be vague. The expressions which are made use of

of to denote a difference in the degree of mental ſuffering are theſe; *diſtreſs, ſorrow, deep ſorrow, grief, melancholy, exceſſive grief, anguiſh*, and *deſpair*; for whatever the particular cauſe is which excites the painful emotion, one or other of theſe expreſſions is generally employed to ſignify the degree of mental ſuffering which the perſon experiences; for inſtance, a perſon may be *diſtreſſed, ſorrowful, grieved, melancholy*, and driven to *deſpair* by a paſt event, which he foreſees will affect his happineſs; or by a preſent event, or by one which is to come.

We are alſo apt to conſider every variety of grief which ariſes from a diſtinct cauſe, as a diſtinct or ſeparate paſſion; and, accordingly, we give them different names.

Although they may be conſidered as differing from each other in kind, yet as they may alſo differ in degree, the affected perſon may make uſe of any of the above terms to denote his feelings.

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The ſorrow and grief which we experience on account of any paſt event, which aroſe from ſome act of our own, and which we conceive to have been blameable, may be called the pain of repentance, or contrition; a higher degree of this kind of pain is called *remorſe*, of all painful feelings the moſt intolerable. When it does not ariſe from our own actions, but from ſome unforeſeen accident, it is ſimply called *ſorrow, grief*, &c.

We have no diſtinct appellations for the painful emotions we experience on account of a preſent event, which interrupts our happineſs, except it be ſudden and frightful; in which caſe we apply the word *terror*. Thoſe kinds of ſorrow that ariſe from ſome future event, which we foreſee will affect our happineſs, belong to the paſſion of *fear*, and its modifications, *anxiety*, *apprehenſion*, and *dread*.

Independently of theſe different painful emotions, we have others which accompany the paſſions, in which averſion principally prevails, ſuch as anger, hatred, envy, jealouſy,

and

and ſhame, for in all of theſe we ſuffer more or leſs mental diſtreſs.

Sorrow and grief, are terms which are often indiſcriminately applied to many kinds of painful emotions; and hence it appears that they cannot, with propriety, be conſidered as diſtinct paſſions. Indeed, ſorrow ſcarcely has a claim to be claſſed with the paſſions, as that word is commonly employed, for in many caſes of ſorrow, and anguiſh, the will is not excited into action by any diſtinct object. But, in the painful paſſions, ſtrictly ſo called, ſuch as anger and rage, jealouſy and envy, there is always an object of averſion which excites volition into powerful action.

In the preſent chapter it is my intention to treat of grief and its modifications as general affections of mind; but as ſome of the painful paſſions have effects on the body which are peculiar to themſelves, I ſhall, afterwards, take theſe into ſeparate conſideration.

The general corporeal effect of all the modifications of grief and sorrow, is a torpor in every irritable part, especially in the circulating and absorbent system; hence the paleness of the countenance, the coldness of the extremities, the contraction and shrinking of the skin, and general surface of the body; the smallness and slowness of the pulse, the want of appetite, the deficiency of muscular force, and the sense of general languor, which overspreads the whole frame.

As the action of the extreme branches of the arterial system is greatly diminished, the heart, and aorta, and its larger vessels, and the whole system of the pulmonary artery, become loaded and distended with blood. The painful sense of fullness which this occasions, gives rise to a common expression, which is, in some degree, descriptive of what really exists; in sorrow the heart is said to be *full*, and in deep sorrow it is often said to be *like to burst*. A sense of oppression and anxiety, a laborious and slow respiration, and the remarkable phenomena of sobbing and sighing, naturally arise from this state of torpor, and retarded circulation.

Sobbing

Sobbing and ſighing are peculiar to certain degrees and kinds of mental pain; as laughter, jumping, and dancing, are peculiar to certain kinds of joy. They are not, however, of ſo intricate a nature as laughter. The way in which they are to be accounted for, is this: as the blood is accumulated in a much greater degree than uſual, in the large trunk of the pulmonary artery, and in the aorta, it is not ſo quickly oxygenated as it ought to be; for the healthy oxygenation of the blood cannot take place except it be circulated with a certain degree of quickneſs; but as it is the nature of our conſtitution that an obſcure pain ſhould ariſe when the actions which are neceſſary for our preſervation are neglected, or impeded, and as this pain generally operates as a ſtimulus to excite theſe actions, ſo in this caſe the preternatural accumulation of blood about the heart produces an uneaſy ſenſe of fullneſs, to relieve which, we take a deep and quick inſpiration; and this conſtitutes the firſt part of ſighing: but the debility ariſing from the primary action of grief being great, the breath is not retained, and ſlowly thrown out as in

ordinary refpiration, but on the contrary, the whole quantity feems fuddenly to efcape, and hence the act of fighing is completed. By this means, the lungs being greatly diftended with air, the large branches of the pulmonary veins are compreffed, and a great quantity of blood is confequently forced out of the lungs. The blood is thereby oxygenated, and the congeftion which had taken place on the right fide of the heart, relieved. The oxygenation of the blood is the ultimate end of fighing, as, indeed, it is of every act of infpiration; the exciting caufe is a phyfical one, namely, the diftention of the larger blood-veffels of the pulmonary fyftem: fighing, therefore, may take place in every cafe of continued grief, or forrow, from whatever caufe thefe proceed. It alfo often takes place from bodily caufes, which produce a diminution of ftrength, or torpor in the whole frame, efpecially in the organs of refpiration; and therefore we find that it is a common attendant on almoft every cafe of chronic weaknefs, fuch as the various ftomachic complaints which come under the denomination of dyfpepfia; amenorrhea alfo, and hyfteria, hydrothorax, peripneumonia

peripneumonia notha, all produce ſighing; but ſobbing is the peculiar effect of certain kinds of mental pain only. When the pain to which we apply the name of grief is powerful, and recent, and the ideas which give riſe to it are of ſuch a nature as to fall on the mind by repeated concuſſions, as it were, the ſenſorial impreſſions of theſe ideas are tranſmitted to the diaphragm with the ſame kind of forcible repetition as the ideas act on the brain. Theſe impreſſions, when they arrive at the extremities of the nerves ſupplying the diaphragm, act like phyſical ſtimuli to that muſcle, and throw it into an interrupted, convulſive action. On the one hand, therefore, the mechanical ſtimulus, ariſing from the diſtention of the pulmonary artery and vein, together with the want of oxygenation of the blood, which are circumſtances common to all kinds of grief, are cauſes which produce the act of deep inſpiration, and ſighing; and on the other hand, the peculiar mode in which the painful ideas act cauſes the external air to be often interrupted, and thus the phenomena of ſobbing are ſuperadded to thoſe of ſighing.

Upon

Upon what general phyſiological principle do grief and ſorrow act, ſo as to produce the various phenomena before mentioned?

The common way of accounting for them is, by ſaying that grief and ſorrow, and their modifications, are depreſſing, or debilitating paſſions; and hence they always occaſion a diminiſhed action which muſt be followed by general torpor and languor. But this is not explaining any thing; for the queſtion is, in what way do they produce this depreſſion of vital energy, this ſenſe of univerſal weakneſs and languor? In the chapter on Irritability I endeavoured to confirm the opinion of the late Dr. JOHN BROWN, that debility may be produced by very oppoſite kinds of cauſes: *firſt*, directly, by withdrawing or diminiſhing the quantity of natural ſtimuli which ſupport all action, and, *ſecondly*, by the action of too great ſtimulants; by which the whole body, or the parts on which their action is exerted, are left in a ſtate which is very properly called *indirect debility*. It is to be recollected that the ſtimuli which produce indirect debility are of two kinds, one of which evidently excites ac-

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tion in the vaſcular ſyſtem, the other exhauſts the principles of life quickly, but in a very obſcure manner, without any evident previous increaſe of vaſcular action whatever. The debilitating powers of grief ſeem to operate in this laſt mentioned manner; they exhauſt the irritability of the ſyſtem without a previous increaſe of vaſcular action. When a perſon is ſuddenly informed of ſome melancholy event that deeply affects his life, fortune, or fame, his whole ſtrength ſeems at once to leave him; the muſcles which ſupport him are all relaxed, and he feels as if his knees gave way under him. In many caſes he actually ſinks down. In ſome people the ſenſorial impreſſion exhauſts the irritability ſo completely as to cauſe the action of the heart and arteries, and organs of reſpiration to ceaſe, and the perſon then falls into a ſwoon, as it is called. The irritability is ſlowly and ſcantily regained during this ſwoon, and therefore it often continues a great length of time. When it is ſufficiently accumulated in the ſyſtem to render the perſon ſenſible of the common external ſtimuli, ſuch

as heat and light, he awakens from the torpid ſtate in which he lay, but then the melancholy thought may again recur to his mind, in which caſe it again produces a renewal of the *ſyncope*. This effect may take place repeatedly, and ultimately lay the foundation for many chronic complaints of the nervous kind.

Cauſes of deep grief, when not clearly foreſeen, may, in certain habits, exhauſt the irritability and power of the nerves ſo much, as to produce all the phenomena of ſleep. This ſleep is generally of the comatoſe kind, or mixed with catalepſy. Of both theſe kinds of inſenſibility, I have ſeen very remarkable inſtances, in which this ſtate of torpor has continued ſeveral days, during which the perſon has not taken any food whatever.

When grief or ſorrow continue permanent for a great length of time, they occaſion much diſorder, both in mind and body, from which the diſeaſe called *melancholy* originates. But it is to be obſerved, that, although it is generally

nerally confidered as a difeafe of the mind, and appears for the moft part to arife from mental, or moral caufes; yet it certainly feems at times to arife from an hereditary fault of the conftitution, for it often pervades feveral branches of one and the fame family: it becomes, then, a matter of doubt, how we ought to proceed in our inquiry. If we follow the progrefs of grief until it terminates in melancholy and delirium, we may appear to be merely giving a hiftory of that paffion; and if, on the other hand, we break off at this place, and begin a defcription of melancholy, confidered as a diftinct difeafe, and as it arifes from conftitutional and corporeal caufes, we may be blamed for want of method, and for having left the hiftory of Grief incomplete. It is worthy of remark, that when melancholy takes it fource in conftitutional and corporeal caufes, yet to a fuperficial obferver it always appears to be the effect of occafional grief and forrow; for the moft ftriking character of the difeafe is dejection of mind, or conftant fadnefs, and in fact the aberration of reafon which fo frequently occurs in this complaint is generally the immediate offspring of melan-

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choly ideas; and again, as deep grief when greatly augmented, terminates in deſpair, and as the ideas which diſturb the happineſs of a melancholy patient often do the ſame, and, alſo, as deſpair, whether it ariſes from grief accidentally excited, or from the diſeaſe called melancholy, generally terminates in a ſimilar manner, it is evident that by tracing and finiſhing the hiſtory of Melancholy, we alſo complete, in a great meaſure, the hiſtory of Grief. I am about to ſhew, then, the progreſs of grief and melancholy, as they terminate in deſpair, ſuicide, and murder; but it is to be recollected that theſe are far from being the conſtant effects either of grief or melancholy; they are only occaſional ones, though, unfortunately, they happen but too frequently. Grief, however great, may gradually ſubſide; and melancholy, in certain conſtitutions, never produces greater miſchief than dejection of mind, and gradual decay, or conſumption of bodily ſtrength, which the patient ſuſtains for many years, and then dies exhauſted. Now, as grief and melancholy have various terminations, it becomes neceſſary to take a full

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view of one before we proceed to another, and therefore, after having difplayed the nature of the delirium which now and then arifes in melancholy, we fhall return to the other terminations of the paffion, and give a complete hiftory of the mental character of this complaint. After having done this, the attention muft be turned to the corporeal caufes.

When any caufe of deep grief and forrow is prefent to the mind, it frequently gains fuch a force as almoft totally to exclude all thoughts except thofe which, upon the principle of affociation, are connected with it. As the attention is ftrongly excited by it, a perfon feels an irkfomenefs when much expofed to impreffions on his external fenfes; for although thefe impreffions do not produce a clear reprefentation in the mind, inafmuch as the attention of the perfon cannot be directed for a fufficient length of time to them, yet they neceffarily reach the mind, and, as it were, irritate it. There is no caufe which prevents the external impreffion from being conveyed to the brain, and when it produces a fen-

ſorial impreſſion there, it operates in a ſlight degree on attention, ſo as to withdraw it for a ſecond or two, but the attention is immediately afterwards re-excited by the prevailing ideas; and thus, when a melancholy perſon is expoſed to ſtrong impreſſions on the external ſenſes, he experiences an uneaſineſs or mental irritation which is much more inſupportable than grief itſelf; he therefore avoids ſociety, and the converſation of his friends; he loves quiet, ſolitude, and darkneſs, and in theſe he broods in ſilence on the thoughts which ſeem to him ſo materially to affect his intereſt or happineſs.

The melancholic perſon, for ſimilar reaſons, avoids bodily exerciſe; and thus, that which is a firſt effect of the debilitating powers of theſe mental affections becomes an agent of greater debility. Indeed, this is altogether the character and nature of every painful paſſion. Every effect becomes an active cauſe of a new ſeries of baneful conſequences. The loſs of vital energy which is occaſioned by grief, or ſorrow, and the want of exerciſe, cauſe a deficiency of appetite and of the

the powers of concoction and chylification. Nor is this to be wondered at when we reflect on the torpor which pervades the whole frame, and the great alteration which grief occasions in the circulatory system. The want of action in the vessels of the skin occasions a sympathetic affection of the stomach. There is a singular affection of this organ which is almost peculiar to grief; it consists in a violent pain, which is commonly felt at the pit of the stomach, and is often so great as to cause the person to emit deep and involuntary groans, or moanings; when it is very violent it generally terminates in a regular hysterical fit, or in convulsions, or in a mild and low delirium, which seldom continues above twelve hours. Of this singular affection I have lately met with several cases, all of them proceeding from deep grief. This pain might easily be mistaken, in some cases, for gastritis, or inflammation of the stomach, if a person was not very attentive to all the symptoms; for it often is permanent for some days, during the whole of which time the patient vomits whatever is swallowed. Now the constant

and acute pain, and the vomiting on taking food, might eaſily deceive a practitioner. It may be diſtinguiſhed, however, from gaſtritis by the pulſe, the ſtate of the ſkin, and the general expreſſion of the countenance; for the pulſe is ſeldom quick, and the ſkin is generally cold, and, to a diſcerning eye, the diſeaſe may often be read in the looks of the patient.

As a phyſician, however, like every other man, may be deceived in the judgments he forms from any expreſſion of countenance, eſpecially as bodily pain often cauſes the features to aſſume the look of dejection, and ſorrow, he muſt not truſt to it alone. I have ſeen this kind of gaſtrodynia, in two inſtances, followed by an hæmorrhage from the ſtomach, lungs, and uterus. This painful affection from grief is almoſt peculiar to females, for, on their delicate frame, mental cauſes of every kind operate, in general, much more powerfully than on men.

As grief and ſorrow, and their modifications, cauſe a preternatural accumulation of blood

blood in the larger blood-veſſels, owing, in a great degree, to the torpor and inirritability of the heart and arterial ſyſtem; and as the veſſels of the liver are, from their ſize and ſituation, liable to be much affected by all ſuch changes, it is natural to imagine that the functions of this viſcus ſhould be greatly changed, owing to the unuſual load of blood which is thrown on it; and the unuſual ſlowneſs with which it is circulated. There can be no doubt that the bile, in many melancholic patients, is completely altered from what it is in health. In a great number it has been found of a deep green colour, in others of a dark brown, and in others of a browniſh black. In many, eſpecially in thoſe in whom it is found of a dark colour, it has been obſerved to be preternaturally thick and tenacious. This circumſtance is taken notice of, not only by HIPPOCRATES and GALEN, but is very particularly deſcribed by the celebrated BOERHAAVE, who ſays, that the black bile of melancholic patients is of a thick conſiſtence, like pitch. But this aſſertion is not exactly true; for although the bile is often changed in

in its qualities, yet I have met with many, in whoſe alvine evacuations there were no appearances which indicated any ſuch alteration to have taken place; and I am inclined to believe that when it does occur in melancholy patients, it is always to be conſidered as the conſequence of the diſeaſe, and not as the cauſe, which the Greek phyſicians ſuppoſed it to be. That ſuch bile produces miſchief when once it is formed, cannot be doubted; and as diſeaſes of the abdominal viſcera, more eſpecially thoſe of the ſtomach and liver, occaſion feelings of anxiety, and the feelings of anxiety occaſion dejection of mind, it will, doubtleſs, tend to aggravate the primary complaint. The ſtomach becomes diſordered, the action of the inteſt[illegible] becomes irregular, the ſecretion of bile [illegible]tered, and the patient is troubled with flatulency, ſympathetic head-ach, vertigo, and many other diſtreſſing ſymptoms; LORRY, de Melancholia, Tom. I. p. 180, and BAGLIVI, Prax. Med. lib. i. cap. xiv. ſ. 4, and FR. HOFFMAN, Med. Syſt. Tom. IV. p. 377. narrate caſes of jaundice, and dropſy, ariſing

from long-continued grief. ALEX. TRALLIEN, lib. i. p. 16. mentions a caſe of palſy, and BONETUS a caſe of aphonia, Med. Sept. lib. ii. ſec. xviii. cap. iv.

The faulty ſtate of the ſtomach and inteſtines, and the neglect of food and exerciſe, ſoon cauſe a great change in the countenance of the patient. The whole fat is abſorbed, and the face grows thin and emaciated, and its muſcles weak and relaxed; the adipoſe ſupport of the eye-ball is gradually diminiſhed; and hence the ſunken eye, and hollow ſocket. The bloom of health diſappears, and the whole countenance grows pale and dejected. Together with theſe phyſiognomical *inſignia* of grief, there is another which ſeems to [illegible] all painters, but which is neither a conſtant or peculiar attendant on this paſſion, for it is common to many others; I mean the eye-brows being drawn together, and a little downward at the ſame time, as if the perſon frowned. This action of theſe parts ariſes whenever attention is deeply engaged with any idea; and as I have already ſaid, is by no

 means

means peculiar to grief. It is, ſurely, needleſs to obſerve, that if theſe diſorders are not corrected, the ſtrength and health of the perſon muſt ultimately give way.

This diſordered ſtate of bodily health, as it is a ſource of many painful feelings, neceſſarily augments the unhappineſs of the ſufferer, and gives him a ſtrong diſreliſh for life; for what can attach a man to the world if it be not the enjoyments he derives from his exiſtence, or elſe a ſtrong ſenſe of moral duty. No man, however, who is oppreſſed with grief, and who is conſtantly preyed on by mental and bodily pain, can be ſuppoſed capable of exerciſing his judgment at all times correctly; a freſh misfortune, imaginary or real, excites an irreſiſtible deſire of relief: tired out, hopeleſs, diſmayed by the threatening aſpect of many a burſting cloud; diſcerning nothing, which ever way he looks, but a dreary and comfortleſs life, how can he be ſuppoſed capable of taking a clear, calm, and comprehenſive view of the obligations he owes his Creator, or ſociety; or of reflecting on the ſudden viciſſitudes

tudes which daily occur in human life, and on which every man may ſafely form ſome hope, even in the moſt diſtreſſed ſituation? The wretchedneſs of life, is the only picture preſent to the mind of one in whom grief has terminated in ſuch a ſtate of deep melancholy; the only objects of compariſon are the miſery of exiſtence, on the one hand, and the relief he can obtain by withdrawing himſelf from it on the other.

What if ſome little payne the paſſage have,
That makes frayle fleſh to fear the better wave?
Is not ſhort payne well borne that brings long eaſe,
And layes the ſoule to ſleep in quiet grave?
Sleep after toyle, port after ſtormy ſeas,
Eaſe after warre, death after life, doth greatly pleaſe.

SPENSER.

Such is the picture of that ſtate of mind which is called deſpair, and which cauſes a man to form the reſolution of ſuicide. It may be conſidered as a delirium, inaſmuch as it is impoſſible for the perſon to uſe his judgment correctly; and yet, in a philoſophical point of view, it may be contended that our judgment

ment is never more correct. Judging arifes from the comparing of thoughts; and every object that employs judgment has its allied ideas, which are the objects of comparifon: but if no other thoughts can come into a man's mind than the wretchednefs of his life, and the relief he is likely to obtain by death, and that his feeling of wretchenefs is augmented by frefh misfortunes, and bodily diforder, it cannot be expected that the judgment will be the fame as in a man who is influenced by ftrong religious and moral principles, and who confiders at the fame time, that an act of fuicide is a crime of the higheft nature, becaufe it is a violence offered to the eftablifhed laws and evident end of human exiftence, as an injury done to fociety by the bad example it fets, and as an injuftice to his family, by the difgrace which it imparts to them.

The ideas which drive a perfon to defpair, and to the determination which has been mentioned, are as various as the fources of human affliction; the dread of poverty and want, the

hopes,

hopes, in which we often injudiciously place too much of our happiness, intirely blasted; either honest or false pride humbled by public or private contempt; ambitious views suddenly and unexpectedly disappointed; and added to these, the pains of the body; such is the general character of the motives which lead to the commission of suicide. These are real motives, the ideal ones are not less numerous; for when once an idea, by its being often presented to the mind, has gained such a degree of force and vividness as to command belief, it is of no consequence as to its effects, whether it originated in a real or an imaginary cause. There are two very common ideal sources of despair, that terminate in suicide, which may be mentioned here, though they have already come under our observation: the one is religious despondency, or a belief that a person is forsaken by the Almighty, or is an object of his anger, and cannot be forgiven; and the second is the idea that a person is so much bereft of understanding as to be totally unfit for the discharge of the common duties of life. The first of these is often accidentally

excited by the injudicious, I had almoſt ſaid criminal, miſrepreſentation of the intentions of the Almighty towards individuals, which many Methodiſtical orators paint in ſuch language as cannot fail to ſtrike terror into weak minds, to the great injury of ſociety, and the ruin of private tranquillity.

The other diſeaſed ideas, which it has been ſaid terminate, at times, in deſpair, are the notions that a perſon is deprived of the powers of reaſon, and, conſequently, muſt ſink into poverty, and become a burthen to his friends. I have to obſerve, that ſuch ideas ſeldom originate but in thoſe who have ſome hereditary diſpoſition to melancholy, and whoſe nervous ſyſtem may therefore be ſuppoſed to be eaſily diſordered, ſo as to yield obſcure, painful impreſſions. They may, doubtleſs, alſo ariſe from imprudent over-ſtraining of the faculties, as happens in men who have ſpent the greateſt part of their life in intenſe ſtudy; for in ſuch caſes the frame becomes weakened and diſeaſed for want of exerciſe, and the mind being too much excluded from gay, agreeable impreſſions,

impreſſions, the nervous principle alſo being greatly exhauſted, diſeaſed feelings, and diſeaſed ideas are thereby apt to be produced.

Inſtead of taking up much time in endeavouring to draw a picture of the general train of thoughts, which ſucceed each other in the mind of a perſon who is affected by this melancholy and painful impreſſion, I ſhall extract and tranſlate a few paſſages from the journal of a ſelf-murderer of this deſcription, which are contained in Vol. I. of the Pſychological Magazine, which, with a few exceptions, depending on difference of ſituation, country, and education, may be conſidered as a general portrait of what paſſes in the minds of all ſuch men, for ſome time previous to the accompliſhment of the horrid deed.

" It has pleaſed the Almighty to weaken " my underſtanding, to undermine my reaſon, " and to render me unfit for the diſcharge of " my duty. My blood rolls in billows and " torrents of deſpair—It muſt have vent— " How? I poſſeſs a place to which I am a " diſhonor,

" dishonor, inasmuch as I am incapable of
" discharging it properly—I prevent some
" better man from doing it more justice.
" This piece of bread, which I lament is all
" that I have to support myself and family,
" even this I do not merit; I eat it in sin,
" and yet I live! Killing thought! which a
" conscience, hitherto uncorrupted, inspires—
" I have a wife, also, and my child reproaches
" me with its existence. But you do not
" know, my dear friends, that if my unhappy
" life is not speedily ended, my weak head
" will require all your care, and I shall be-
" come a burthen rather than an assistance to
" you. It is better that I yield myself a timely
" sacrifice to misfortune, than by permitting
" the delusion to continue longer, I consume
" the last farthing of my wife's inheritance—
" It is the duty of every one to do that which
" his situation requires—reason commands
" it—religion approves. My life, such as it
" is, is a mere animal life, devoid of reason:
" in my mind, a life which stands in opposi-
" tion to duty is moral death, and worse than
" that which is natural. In favour of the few

" whose

" whofe life I cannot render happy, it is at " leaft my duty not to become an oppreffion. " I ought to relieve them from a weight " which, fooner or later, cannot fail to crufh " them."

It would be tedious, and it is quite unneceffary to tranflate more of this journal, fince it is all in the fame ftrain as the above. Mr. Glave, an Aulic counfellor, and government minifter, at Infterberg, who fent the papers to the editors of the Magazine, fays, that the unfortunate man fent his wife to church, on Sunday, May 13th, 1783, and after writing an addition to his journal, he took a pair of fciffars and cut his throat, but did not kill himfelf. He then opened the arteries of the wrift, and again failed in deftroying himfelf; he ftaggered to the window, and faw his wife returning home, upon which he feized a knife ufed for killing of deer, and ftabbed himfelf in the heart. He was lying weltering in blood, when his wife came in, but was not quite dead. Mr. Glave adds, that he was a man of underftanding, and of a lively wit. He

He poſſeſſed a great deal of theoretical learning. His heart was incorruptibly honeſt. Like every calm and determined ſelf-murderer, he was proud; but his pride was not the pride of rank, of riches, or of learning; but that divine pride which ariſes from a conſciouſneſs of incorruptible honeſty, and of being poſſeſſed of good powers of mind. The office he held was that of aſſiſtant judge, in a ſmall and lately inſtituted college of juſtice, at Inſterberg. His mother had been once deranged in her mind.

Another very common termination of deſpair is in murder. A perſon may be determined to this act by a variety of thoughts; a melancholic perſon may falſely imagine that his relations and friends are combined to ruin him, or kill him; his fears and anger point them out as objects of revenge; if it proceeds from poverty, he may conſider the deſtruction of his wife and children as a means of liberating them from pain. A perſon driven to deſpair by diſappointment, or perſecution, is ſtimulated to murder, in general, from a kind

of

of paſſion approaching to the nature of revenge, as is the caſe of many diſappointed lovers. But there is another very frequent cauſe of murder in ſuch people, I mean a ſtrong inclination which they have to terminate their own exiſtence. That a man whoſe health of body and energy of mind are greatly weakened and diſturbed, and who has no other thought which engages his attention but his own miſerable ſituation, and who in addition to ſuch circumſtances has probably to contend with poverty, obſcurity, diſappointment, and neglect, ſhould at laſt give way to the force of his deſire for death, and loſe all command of mind, and put a voluntary end to his exiſtence, are circumſtances which do not require any further elucidation; or that a man driven to deſpair by a repetition of misfortunes, and who yields to the idea that he is entirely cut off from every hope of relief, ſhould do the ſame thing, is alſo ſufficiently intelligible; but it is a matter of curious inquiry to attempt a diſcovery of thoſe acts of judgment, which prompt ſuch miſerable men, whoſe only object is to eſcape from life, to transfer the act of cruelty from

their

their own perſons to thoſe of others. The generality of people are ſatisfied in a very eaſy way concerning this ſingular phenomenon. They ſay ſuch men are mad; what neceſſity, then, is there for any further inquiry into the reaſon of their actions? To which I anſwer, that as no madman ever commits a voluntary act * without a motive, the queſtion of curioſity is, What motive it is which prompts ſuch a perſon to deſtroy an innocent being, and perhaps the one he is moſt fond of, while the principal deſire in his mind, and which, in a great degree, occaſions his erroneous judgment, is the wiſh of putting a period to his own exiſtence; for I hope I need not repeat, that it is of ſuch men only that the preſent queſtion is. The fact itſelf is too notorious to be denied; the firſt phenomenon by which deſpair, ariſing from a deſire of eaſe from pain through the medium of death, exhibits itſelf, is often the murder of another.

* Let not this expreſſion be confounded with a *reaſonable act*, as is too frequently the caſe in common converſation.

In

In many inſtances it evidently ſprings from an erroneous judgment in regard to the nature of crimes. A perſon bent on death thinks it leſs criminal to deſtroy another than to commit ſuicide. The idea in his mind is, that he is forcibly put to death in the one caſe, whereas in the other he counteracts the laws of nature; and in general this notion is combined with very falſe religious opinions. The two following caſes which put this matter in a clear point of view, and exhibit the whole train of thoughts which impel people to ſuch acts, are both of them tranſlated from the Pſychological Magazine. The firſt is related in Vol. III. part 3, p. 35, and the other in Vol. I. part 2. p. 10.

Caſe I. " A young woman, MARGARET K. " 23 years old, was ſent to the houſe of cor-" rection, in Onolzbach, in Sep. 1755, on " account of various miſdemeanours which " ſhe had committed. She was received, as " ſuch perſons uſually are, with blows and " ſtripes. One of the blows of the whip " made uſe of for this cruel purpoſe wound-

" ed

" ed her ſeverely in the left breaſt, and gave " her the moſt acute pain. This treatment " made ſo deep an impreſſion on her mind, " that ſhe began to deteſt life, and in order " to get rid of it ſhe determined to commit " murder. She thought that by ſo doing ſhe " would have time allowed her for repentance, " which ſhe knew ſhe could not have were " ſhe to deſtroy herſelf.

" She premeditated her deſign in cold " blood, and accompliſhed it on another wo- " man in the following manner:

" One Sunday ſhe complained of being ill, " and requeſted to be excuſed from attending " divine ſervice. A ſimple and half-fatuitous " girl, of the name of MEDERIN, was allowed " to attend her. MARGARET K. convinced " this girl that there was no hope of their " being relieved from their preſent miſerable " ſituation but by their both conſenting to " die; and ſhe propoſed to MEDERIN to kill " her firſt. The girl was ſoon reconciled to " the propoſition, and the only condition ſhe

" made

" made was that her companion ſhould not " hurt her. She ſtretched herſelf out, and " the murdereſs accompliſhed the horrid " crime by cutting the girl's throat. MEDE- " RIN ſuſtained the blow with perfect re- " ſignation, and died ſoon after." I interrupt the relation at this part merely to ſay, that I omit tranſlating thoſe paſſages in the original which deſcribe the cruelties that were inflicted on this unhappy woman on her firſt reception in the houſe of correction, and which occaſioned her crime. They only prove with what inhumanity many of the keepers of ſuch places abuſe their power. I proceed to tranſlate that part of her examination which throws light on the ſtate of her mind.

" Upon being aſked, in the court of juſtice, " what could induce her to commit ſo horrid a " deed as the murder of her fellow priſoner, ſhe " anſwered, fear for the ſharp blows, and pain " ſhe knew ſhe had to ſuſtain in the houſe of " correction. She thought within herſelf, If " I take away my own life, my ſoul is loſt for " ever; but if I murder another, although in

" that

"that caſe I alſo muſt forfeit my life, ſtill I "ſhall have time to repent, and God will "pardon me. When ſhe was aſked if ſhe had "no hatred againſt the deceaſed, or if ſhe had "ever received any ill-uſage from her, ſhe "anſwered, 'That the deceaſed had never 'done her any injury; and if any thing vexed 'her (the deceaſed), ſhe always came to her 'to make her complaints.'

"Upon being aſked if ſhe ſlept quietly "after having committed ſo horrid an act, "ſhe anſwered, that 'ſhe prayed to God be- 'fore going to bed, and ſlept well, and when 'ſhe awoke, ſhe again prayed.'

"She appeared perfectly calm and collected "during her trial, and until the nature of her "crime was explained to her; and when ſhe "underſtood that ſo far from her having taken "the road to happineſs, ſhe had drawn the "eternal wrath of God upon herſelf, ſhe wept "bitterly.

"The

" The phyſician who attended her aſcribed " the crime to deſpair, and *tædium vitæ;* but " the law would not underſtand the hint."

" Daniel Voelkner was born in Fried-" land, ſix (German) miles from Köningſ-" burg, in Pruſſia. He loſt his father when " he was fourteen years old, about which " time he was put apprentice to a ſhoemaker. " After his apprenticeſhip was finiſhed, he " went to Dantzic, with a view of proſecuting " his trade; but before he could get work " enough to ſupport himſelf, his travelling " cheſt, containing all his tools, was ſtolen " from him.

" As it was not poſſible for him to work " without theſe, he enliſted himſelf for ſix-" teen years in the ſervice of his Daniſh Ma-" jeſty, and was ſent to Copenhagen.

" Although, according to his own account, " he experienced many hardſhips from his " officers, yet he completed his ſixteen years " duty; after which he reſolved to viſit his

" native home; but on his journey thither " he met with a difcharged foldier, whofe " name was VORMAN, and who was a free- " man, and fhoemaker, in Meyburgh, on the " borders of Mecklenburg. He engaged " himfelf with this man, but the bufinefs did " not pleafe him, and he quitted it the fame " day he began it. He went to an alehoufe, " and enlifted himfelf in the cavalry, and on " the 11th of March, 1753, was draughted " into the regiment of Winterfheim.

" It would appear, that from this period to " May 23d, murderous ideas fprang up in his " mind; and, unhappily, it alfo appeared " that thefe owed their origin to religious " enthufiafm. His ideas of the happinefs of " a future life were of the moft vivid kind, " fince they terminated in wearinefs of life, " and in the defire of throwing off his mortal " burthen. The only way which prefented " itfelf to his mind to obtain this defirable " end was to forfeit his life by murder; after " the accomplifhment of which act, he ima-

" gined

" gined he would have time enough to make
" his peace with God.

" According to the teſtimony of his comrade and bedfellow, THOMAS GEIMROTH, this man lived a pious life, ſinging religious hymns, and reading godly books, one of which he offered his companion, for his edification. He often admoniſhed GEIMROTH to become devout, adding, that he himſelf had been very wild in his youth, but that he now was in the right way.

" One night, when in bed, the idea of teazing VOELKNER a little, on account of his extravagant piety, occurred to GEIMROTH; he ſaid, he looked upon it to be a thing unreaſonable in ſome people to act ſo uncommonly devout a part, as if with a view of making it appear that they alone merited happineſs hereafter. Upon which VOELKNER anſwered, it was extremely unjuſt in him to think ſo, and immediately began to cry out, *I muſt, I will be happy hereafter*. Theſe words he repeatedly uttered

" with a loud and harſh voice, toſſing his legs " and arms about in a violent manner, and " ſtarting from one part of the bed to ano- " ther. After this idea of his being deter- " mined, with all his might, to become hap- " py had dwelt ſome time in his mind, he " broke forth in ſorrowful complaints about " his paſt life, and began to exclaim, *I am* " *come to this at laſt; I am come to this at laſt;* " which words he repeated three or four times. " Upon his companion aſking him to what " he was come? he anſwered the ſame thing.

" According to VOELKNER's own teſtimony, " he had long entertained the idea of murder- " ing a child, becauſe he thought that after " having confeſſed, and made his peace with " God, he would ſoon reach that place, and " that happy life for which he ſighed. Three " weeks previous to the act, he ſuffered " indeſcribable anxiety, and uneaſineſs. It " appeared to him as if he was obliged to " kill ſome one. On ſome nights he ſlept " well, on others not at all; but the idea

" of

" of murdering ſome one always returned with
" the light of day.

" Three days before he committed the
" crime, he went to the church-yard, and
" played with the children who were there,
" intending, if he had an opportunity, to kill
" one of them.

" At laſt, on the 23d of May, in the even-
" ing, he accompliſhed his horrid purpoſe.
" A little girl, who had a companion at the
" houſe where Voelkner was quartered, came
" that evening to pay her a viſit. The landlord
" of the houſe, and his comrade, were both
" gone out about an hour before. Voelkner
" invited the two little girls to his room, and
" divided between them his ſupper; immedi-
" ately after which, placing his hand on the
" forehead of one of them, he bent her head
" back, and with a knife, which he had
" ſharpened on purpoſe a day or two before,
" he cut her throat. He then went to the
" guard-houſe, ſurrendered himſelf, told what
" he had done, and acknowledged that it now

" cauſed

" caufed him much regret. He was im-
" mediately taken to prifon, where he flept
" calmly the whole night, for he acknow-
" ledged that the uncommon uneafinefs he
" had experienced for three weeks before
" ceafed upon his committing the act.

" During his examination he anfwered like
" a reafonable man, and expreffed himfelf
" with precifion, behaving himfelf decently,
" both in word and deed. He narrated the
" principal circumftances of his life, and faid
" he knew perfectly well what confequences
" were to be expected from fuch an action,
" and that he would be obliged to anfwer it
" with his blood. But this thought was,
" at that time, by no means difagreeable to
" him."

It would appear that murder may, in certain cafes, proceed in a melancholic perfon, and as an effect of defpair, from tendernefs towards the victim; the idea which infpires this horrid determination of mind is, that of faving the beloved object from the fame caufes of

of painful diſtreſs and affliction which prey on the ſpirits of the inſane perſon. Such a reſolution as this ſeldom takes place until a kind of delirium occurs; but this delirium is always of ſhort duration, and occaſioned by one or more painful ideas, which are diſſipated by the act; and hence, to the generality of people, the patient appears after the act has been committed, as one who has the uſe of reaſon. It is not like the delirium of maniacs, which ariſes from a diſeaſed action of the blood-veſſels of the brain, and is totally independent of any mental cauſe, and is, alſo, permanent for a conſiderable length of time, but it is a temporary loſs of judgment, or rather, it is a ſudden erroneous judgment, from the action or renewal of painful thoughts.

Catherine Hauslerin, forty-five years old, was an inhabitant of the village of Donauworth. She had been twelve years married to a man of a ſevere and unfeeling temper; and, excepting a fever, and ſome ſlight irregularities in regard to her menſtrual

ſtrual diſcharge, was a tolerably healthy woman.

About the end of the year 1785, ſhe was detected in ſtealing milk in the village where ſhe lived. She ſolicited, in the moſt earneſt manner, that the circumſtance might be concealed from her huſband, whom ſhe dreaded, and ſhe obtained a promiſe to that purpoſe; but it was not obſerved. At firſt he was told of it in an obſcure way, but he afterwards diſcovered the whole truth.

It appeared from the teſtimony of ſeveral witneſſes that the detection of her fraud had made a deep impreſſion on her mind, not only on account of her good name, but alſo on account of the treatment ſhe was likely to receive from her huſband, and that in conſequence of this, ſhe became low and melancholy. It appears alſo, from the regiſtered account of her trial, that ſhe had confeſſed, and yet (what is very uncommon with Catholics), it did not relieve her mind, for ſhe prayed often without knowing what ſhe

ſhe ſaid; and ſhe had been frequently ſeized with violent head-achs, during which ſhe was not conſcious of what ſhe did.

It was the 1ſt of December, 1786, before ſhe learnt with certainty that her tyrannical huſband was acquainted with the theft ſhe had committed. He had often threatened, before that time, to kill her if the report proved true; and he now beat her ſeverely. In the court of juſtice, however, ſhe did not ſeem to have any recollection of the ill-treatment ſhe had received.

Upon being aſked how often her huſband had beaten her, ſhe anſwered, ſhe did not know; her huſband knew; ſhe herſelf had no memory.

After this treatment, ſhe went to bed, trembling for fear, and dreading worſe uſage the next day. Her daughter, a little girl about ſeven years old, came to her bedſide, and prayed with her. She had formed the reſolution of leaving her huſband, and aſked her

her daughter if ſhe would ſtay with her father. This the girl refuſed to do, as ſhe was afraid of him. After praying devoutly, early in the morning, ſhe left her huſband's houſe, and took her daughter along with her, and alſo her infant, which was only two months and a half old. As ſhe was about to depart, ſhe again aſked her daughter if ſhe would not rather live with her father; but the girl anſwered ſhe would rather die. The thoughts which this anſwer occaſioned in the mother's mind, the miſery and diſtreſs which ſurrounded her, the fear of what might happen to her children in caſe ſhe died, and, at the ſame time, her own ardent wiſh to finiſh her exiſtence, all theſe things cauſed her to form the barbarous reſolution of drowning them.

The infant ſhe took in her arms, and being arrived at the border of the Danube, ſhe cauſed her daughter to kneel down and pray to God to deſerve a good death. She then tied the infant in the arms of the girl, bleſſed them by making the ſign of the croſs on them, and threw both into the river. She afterwards

returned

returned to the village and told what ſhe had done. *Pſychological Magazine*, Vol VI. part 3. p. 47.

Grief and melancholy do not always terminate either in a gradual atrophy, or in deſpair. They may be preceded, and are often followed by, a ſtate of fury, as has already been obſerved in the chapter on Delirium; and, independently of this, it may terminate in that mild kind of delirium in which ſome imaginary object of thought, accidentally excited, commands a perſon's firm belief.

The termination of melancholy in furious delirium, or in a ſtate of mania, is, perhaps, one of its moſt common changes. Previous to the commencement of this violently diſordered ſtate of the brain, the patient is generally obſerved to be more abſent and melancholy than uſual; he is more ſilent, alſo, but yet there is ſomething wild and alarming in his looks. He is, at times, greatly diſturbed by his thoughts, and always appears more or leſs confuſed, juſt as if there

was a beginning intoxication, which deranged not only the impreſſions of external objects, but alſo the ſenſorial ones which ariſe from his ideas.

Why melancholy ſhould, in one caſe, terminate in, or at leaſt alternate, with a ſtate of furious delirium, having all the true character of mania, and, in another caſe, be ſucceeded by a very mild aberration of reaſon, in which not only the thoughts, but the actions of the man are inoffenſive, as in the caſe which follows, is certainly a very intereſting ſubject of inquiry; but at the ſame time, a very intricate one to develope. The phyſical conſtitution of the patient ought always to be taken into account; and it is, perhaps, of all cauſes the one which has the moſt influence in producing one or other of theſe events juſt now mentioned, eſpecially when they are excited by mental cauſes. The diſpoſition to iraſcibility of temper, and to good humour are born with people; for we ſee theſe two extremes of mental character evidently marked in the conduct of different infants, long before education

can

can have produced any effect on them. Education, indeed, may correct and improve, and alſo hurt and ſpoil what nature has done; accordingly we find, on the one hand, that by means of a judicious controul, violence of temper may be ſoftened; and, on the other hand, a natural amiableneſs of temper may be rendered rough and offenſive by example, or by unwiſe management; but ſtill the natural character ſhall, at times, break forth. No ſet of men have greater opportunities of obſerving this than phyſicians, who ſee mankind under the influence of ſuch cauſes as muſt neceſſarily deſtroy the effects of artificial habits. Thoſe whoſe nerves are diſpoſed from birth for the eaſy reception of pleaſurable ſenſations, in whom all the actions of the different ſets of veſſels go on with freedom, and who conſequently are of a cheerful diſpoſition and amiable temper, preſerve the natural character of that diſpoſition in every diſeaſe. If they ſuffer either from corporeal or mental cauſes, they for the moſt part exhibit much patience and reſignation; or if they do expreſs the pain which they experience, it is in gentle

terms, ſuch as always beget more pity and ſympathy in the breaſt of the by-ſtanders, than the impetuous and often unreaſonable complaints of thoſe whoſe diſpoſition is ſo much oppoſed to this; for this other claſs of men are born with nerves acutely ſenſible, and eaſily irritated, and hence they are conſtantly expoſed to cauſes of inquietude and pain. While children they are fractious, ill-tempered, and unruly, and although the offenſive points of ſuch a character may be worn down by a judicious mode of education, and they may be taught a conſiderable degree of ſelf-command, yet when under ſuch impreſſions as deſtroy the degree of attention which is neceſſary in every act of judgment, the natural phenomena of pain break forth, and they become peeviſh, quarrelſome, and unreaſonable; and this conduct is always augmented by the injudicious conceſſions, or compliance of their attendants and friends.

The individuals of both theſe claſſes may, doubtleſs, be ſeized with mania, and that of an impetuous and ungovernable kind, the

only

only difference being in degree; the one being much more unruly than the other; but the violence of temper which occurs in this disease never takes place except the mania originate from corporeal causes, and in such as are strongly predisposed to insanity. Corporeal, or physical causes may occasion such an uncommon degree of increased arterial action in the brain of the one as well as that of the other, as shall be productive of this violently deranged state; but when mental causes of distress operate on these two classes of people, their effects are generally very different; for mental pain, like corporeal pain, is borne with much more ease by the one than by the other, and accordingly we find that when melancholy is thus produced in them, it assumes a different character: in the one case, it is not long borne, if the causes of grief be severe or frequent, without producing despair and its attendants; or else it terminates in a furious delirium; but in the other case, the causes of mental pain, although acute, and often irremediable, shall be sustained with great patience, and when the judgment at last begins

to

to fail, and a delirium enſues, it is generally of a mild, though of an equally obſtinate kind as to its removal. Of the firſt kind of delirium ſucceeding melancholy from mental cauſes, ſome caſes have already been adduced; of the other, or milder kind of delirium, ſucceeding melancholy from mental cauſes, the following appears to me to be a ſtriking inſtance.

" CHRISTIAN GRAGERT, one of the *Gens*
" *d'arms* of Berlin, was of a harmleſs and
" quiet diſpoſition, but rather of a ſuper-
" ſtitious turn of mind. He frequently un-
" derwent harſh military diſcipline, on ac-
" count of a natural ſtiffneſs in his joints,
" which prevented him from marching and
" performing the other parts of his duty. In
" addition to the pain and humiliation which
" this occaſioned, he ſuffered much from
" poverty, and a multiplicity of unfortunate
" events, which occurred in his family and
" houſehold affairs. Theſe circumſtances
" ſoon induced ſuch anxiety, as often cauſed
" him to paſs many ſleepleſs nights; and
" which

"which anxiety of mind, according to his "own report, could not be diſſipated but by "the peruſal of pious books. In reading "the Bible, he was ſtruck with the book of "Daniel, and was ſo much pleaſed with it, "that it became his favourite ſtudy; and "from that time the idea of miracles ſo "ſtrongly poſſeſſed his imagination, that he "began to believe that he himſelf could per-"form ſome. He was perſuaded, for in-"ſtance, that his power was ſuch, that if he "were to plant an apple tree with a view of "its becoming a cherry tree, it would bear "cherries! He was diſcharged from the "king's ſervice, and ſent to the workhouſe, "where he conducted himſelf calmly, or-"derly, and induſtriouſly, for two years, "never doing any thing which betrayed in-"ſanity. It was then reſolved to ſend him to "his family, and Dr. Pihl, before diſmiſſing "him, examined him.

"He anſwered every queſtion properly, "except when the ſubject concerned mira-"cles; but in regard to theſe he retained his

" old notions, adding, however, at the ſame " time, that if he found, upon trial, after " he was at home, that the event did not " correſpond with his expectation, he would " readily relinquiſh the thought, and be- " lieve he had been miſtaken. One error " of his mind he had already removed in this " way; for there was an old woman whom " he, at one time, conſidered as a witch, but " whom he afterwards diſcovered upon trial " to be no ſuch thing." His great deſire was to be allowed to return home to his wife and family, which was granted him.

Enough has been ſaid to point out what kind of ideas create grief; how grief and other varieties of mental pain, when long continued, diſorder the functions of the body, and, alſo, how, by conſtantly preſerving one chain of thought, they cauſe falſe judgments to ariſe; how theſe diſorders of body and mind create the diſeaſe called melancholy, and, likewiſe, how this diſorder may terminate in tædium vitæ, ſuicide, murder, mania, and mild delirium. It now remains to ſpeak of melancholy

as arifing from a peculiar idiofyncrafy of the folids and fluids.

In thofe who, by the peculiar organization of their frame, are greatly difpofed to this complaint, a number of difeafed affections generally exhibit themfelves before the age of thirty, or thirty-five. The moft common fymptoms are head-achs, frequent attacks of giddynefs, fudden confufion of ideas, a great difpofition to anger, violent agitations when irritated, and uncommon fenfibility of nerves, whereby they are apt to be carried to as great exceffes from caufes of joy, as from caufes of grief. But before thefe fymptoms occur fo frequently as to excite attention in the friends or by-ftanders, the difpofition to melancholy may often be difcerned by external figns, which are conftant in certain individuals. Thefe figns conftitute the external character of what the ancients called the melancholic temperament, and are as follows: a lean and dry frame, the very reverfe of the plump, fucculent, and flefhy appearance of a perfon in good health, efpecially one of the fanguine

temperament; ſmall and rigid muſcles, the interſtices between which are not filled u with fat, a ſallow ſkin, and complexion which is frequently of a browniſh yellow colour, with little or no admixture of red, deep black ſtiff hair, eyes ſunk, hollow ſockets, large veins, eſpecially in the hands and arms, and a conſtant expreſſion of dejection. Such are the characters of the melancholic temperament which are mentioned by the ancients, and copied by all ſucceeding writers. It is, however, to be obſerved, that theſe ſigns do not always appear in early life, even where there is a ſtrong tendency to melancholic inſanity. They are rather to be conſidered as the effects of the diſeaſe, after it has continued for ſome years. Of many melancholic patients who have fallen under my care, both as out-patients of the Weſtminſter Infirmary, and in private practice, ſeveral have had the remains of the external characters of the ſanguine temperament, that is, they have had fair, or reddiſh hair, a fair but rather pale complexion, blue eyes, and fine ſkin.

After

After the age of thirty, ſometimes much earlier in life, if they have been born of melancholic parents, theſe people begin to have indeſcribable ſenſations of anxiety, and internal uneaſineſs, of which they can give no good account, but which have ſo powerful an effect on them as to make them withdraw themſelves from ſociety, and abandon themſelves to tears, and other affections of grief. I have known this happen to young men of my acquaintance, who were not more than 19 years of age. They are always ſubject to impreſſions of fear; and many imaginary objects of terror and diſtreſs are conſtantly preſent to their mind. Some are ſeized with an affection of phrenzy in early life; others continue free from it until conſiderably advanced; and others are never affected with any furious delirium, but paſs their days in conſtant deſpondency.

In thoſe who are conſtitutionally inclined to melancholy, and who have had frequent attacks of it, for it often ſubſides, and returns again, much diſorder at laſt takes place in

various functions of the body. Theſe are ſimilar to the diſorders which are occaſioned in almoſt every perſon by long-continued grief, ſuch as a depraved appetite, being either much impaired, or almoſt totally aboliſhed while melancholy prevails, and a keen and ravenous appetite, when it is abſent. They are troubled with flatulency, with acute pains in the hypochondriac regions, with hæmorrhoids, and irregularities in the alvine diſcharge. Theſe bodily affections, however, are not to be met with in every caſe of melancholia, for many ſhall have all the mental characters of the complaint for ſeveral years, and yet have no remarkable diſorder in the corporeal part of their ſyſtem. The functions of the liver are thoſe which are moſt commonly changed, for the bile is ſeldom found to have its natural qualities in thoſe who have long laboured under this diſorder. It is often vomited of a deep green colour, and acrid quality; and before it is evacuated in this way, it occaſions head-ach, fluſhings of heat in the face, and a ſenſe of burning heat in the hands, accompanied with a metallic taſte

in

in the mouth, refembling that which a piece of brafs or copper imparts to the palate. In fome others the bile produces diforders in the inteftines, and gives a kind of pitchy confiftence to the ftools, as has been already taken notice of; but thefe phenomena are by no means conftant or neceffary attendants of melancholy. The general mental character of the complaint, when it arifes from ftrong hereditary predifpofition, is this: frequent feelings of anxiety, grief, and defpondency, a defire of doing well, but an incapability of fteadily purfuing any laudable exertions, on account of painful internal fenfations, and involuntary acts of judgment, founded on falfe or erroneous thoughts, which, however, command a firm conviction in their mind; they have, alfo, a ftrong defire of relief, and fymptoms of defpair, or tædium vitæ, in confequence of finding that no relief can be obtained from the conftant mifery under which they labour. It is furely needlefs to add, that in the delirium of defpair they may commit any of the rafh acts which attend this ftate. A fingle cafe will put this in a clearer point

point of view than can be deſcribed in general terms. " D. SEYBELL was admitted into
" the Orphan Hoſpital, at Potſdam, when he
" was four years old, and remained there
" until he was twenty. He was brought up
" by trade to be a ſhoemaker, and was, ac-
" cording to the teſtimony of all who knew
" him, a quiet, induſtrious, and pious man;
" rather ſimple, and timorous, and more in-
" clined to grief than to joy. Even in his
" early years he frequently fell into a ſtate of
" melancholy, in which he behaved himſelf
" ſtrangely, and hence he obtained, among his
" companions, the nickname of the mad Sey-
" bell. He was exceedingly plethoric, and
" ſubject to ſudden ebullitions and determina-
" tions of the blood to the head, which were
" always accompanied with great reſtleſſneſs
" and anxiety, and which were augmented or
" diminiſhed according as the commotion in
" the ſanguiferous ſyſtem was increaſed or
" leſſened. In his later years this diſorder
" terminated in true melancholy.

" He

"He had not learnt his profeſſion ſuffici-"ently well to ſupport himſelf by it, and he "was not fortunate enough to pleaſe the va-"rious maſters into whoſe ſervice he went; "hence his mind was filled with diſpleaſure "on account of his own inferiority and want "of talents; and a conſtant dread preyed on "his ſpirits, leſt he ſhould be turned out of "all employment, and be rendered deſtitute. "Under this apprehenſion, he one day ſud-"denly, and without any cauſe being given, "left the houſe of a Mr. Counſellor Oessfeld, "of Potſdam; in the ſervice of Captain Von "Winterfield, he attempted to ſhoot him-"ſelf; and, while with Mr. Wissman, he "threw himſelf out of a three pair of ſtairs "window.

"From December, 1772, to January, 1781, "he lived in a ſtate of great poverty, ſupport-"ing himſelf by ſewing, the profits of which "were hardly ſufficient to ſupply his moſt "urgent wants. He had alſo a few debts, "which he was anxious to diſcharge, but "being without the means of doing ſo, he

"could

" could not gratify this wiſh. Tortured by " conſtant anxiety and diſtreſs, which he en- " deavoured in vain to alleviate by prayer; " tormented by the foreſight of ſpending an " unhappy and miſerable exiſtence; fearful " leſt he ſhould be arreſted on account of his " debts, which were really inconſiderable, " and prepoſſeſſed with the idea that his af- " flictions would not be terminated but by his " death, the unlucky thought ſprung up in " his mind of accelerating that wiſhed-for " event by murdering a child. The child " whom he ſelected, as the inſtrument by " which he was to attain heaven, he loved to " exceſs, as he himſelf avowed, and as its pa- " rents teſtified, who ſaid that he had taught " the child many prayers, and ſeveral paſſages " of the Bible.

" The ſtrong love which he entertained for " this little object of his regard, was once the " cauſe of its life being ſaved, when he had " previouſly determined in his mind to take it " away; but one day afterwards being ſuddenly " ſeized with a furious delirium, he quickly " murdered

" murdered it. He tried to conceal the body, " and yet the moment after, he went out of " the houſe and told what he had done."

That a certain peculiarity of diſordered conſtitution, which, by conſtantly yielding a number of diſeaſed and painful ſenſations, prediſpoſes to melancholy, may be accidentally created, as well as born with a perſon, is a fact founded on daily experience. Many profeſſions give birth to it, and it alſo often ariſes from the injuries which a diſſolute life, and various exceſſes in diet and drink occaſion; ſhoemakers, who not only live a ſedentary life, but ſit conſtantly bent, and ſuſtaining an injurious preſſure on the ſtomach, taylors, bakers, and glaſs-blowers, who are exhauſted by intenſe heat, ſevere work, and hard drinking, and men of letters, who neglect all exerciſe, and live too much retired, are the moſt frequently expoſed to occaſional ſymptoms of this dreadful malady; but even in theſe men whoſe health is much deranged, true melancholy ſeldom ariſes, except mental cauſes of grief and diſtreſs join themſelves to the

the corporeal ones, and this conſtitutes one of the characters which diſtinguiſhes *Melancholia vera* from *Hypochondriaſis*. The former may be ſaid to be always excited by mental cauſes, and conſiſts in various phenomena of grief, deſpondency, and deſpair; whereas the latter moſt commonly ariſes from corporeal cauſes, and its mental phenomena conſiſt of erroneous ideas entertained about their own make or body. Theſe two diſeaſes are, indeed, often united in the ſame ſubject, and then the mental character is ſeldom conſtant; for, at times, the ſtrange illuſions of hypochondriaſis prevail, and at other times the deſpondency and deſpair of melancholy. Melancholic patients ſeldom live long. They often terminate their own exiſtence in the attacks of the diſorder; but even when carefully watched, and every care is taken of them, they never attain old age. Many die before thirty or forty, and few live beyond ſixty; but a great deal of diverſity in this reſpect ariſes from the difference of the time of life when they are firſt ſeized with the complaint. See

GREDING'S

GREDING'S Aphorifms, at the end of this work.

It has been already explained how repeated caufes of mental pain fhall, at times, give birth to the predifpofition to melancholy, and if frequently renewed, fhall at laft induce it. Thefe caufes, although very numerous, may all be reduced under a few general heads, or claffes; and, accordingly, as the difeafe originates from one or other of thefe, it may receive its denomination from that fource. It is upon this principle that SAUVAGES and his copyers make fo many different kinds of melancholy.

In order to render the hiftory of this humiliating and painful difeafe tolerably complete, it will be neceffary to make a few obfervations on the various fpecies of melancholy which are defcribed by SAUVAGES.

The firft which is mentioned by SAUVAGES, he denominates *Melancholia Vulgaris*, or common melancholy (Nofol. Method. Tom. 2.

p. 251.

p. 251. edit. Amſtel. 1768.) He does not give any general character of it, but relates a number of caſes which he thinks are to be referred to it; though the greater number of theſe, in my opinion, ought to be claſſed under the head of Hypochondriaſis. The firſt caſe is that of a phyſician, who, after he was cured of a fever, imagined that he was poiſoned by the apothecary. This caſe is too briefly related to authorize any very decided opinion concerning it. It may have been a caſe of real mania, ſuch as now and then occurs after fevers, eſpecially where there is much prediſpoſition to the complaint, or it may have been a caſe of melancholy. The next is that of a rich man, who imagined himſelf reduced to the greateſt poverty, and would not ſtir out of bed for fear of wearing out his clothes: in every other reſpect he was a reaſonable man. This is, doubtleſs, a caſe of real melancholy. Almoſt all the other caſes which are mentioned by SAUVAGES, as inſtances of the melancholia vulgaris, are evidently caſes of hypochondriaſis; ſuch, for inſtance, is that of the man who believed himſelf

ſelf a dunghill cock, and occupied himſelf in crowing, and imitating the noiſe which that animal makes when it flaps its wings; ſuch, alſo, is the caſe of the man who believed his legs to be made of ſtraw; and of him who being afraid leſt Atlas might grow tired of ſupporting the world, imagined he would throw it upon him; and, laſtly, all thoſe of whom SAUVAGES ſpeaks, who imagined that their heads were made of glaſs, and thoſe who fancied they were wholly compoſed of ice, all of which caſes he deſcribes as common melancholy, are in fact ſo many inſtances of true hypochondriaſis.

The ſecond ſpecies of melancholy mentioned by this celebrated writer, is the *Melancholia Amatoria*, or *Erotomania*. Sentimental love, undoubtedly, when in a certain degree, may juſtly be conſidered as a ſpecies of melancholy. The deſcription of this diſeaſe will fall under our obſervation in the chapter on Love.

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The third is the *Melancholia Religiosa* of our countryman CHEYNE, the origin and hiſtory of which has been deſcribed.

The fourth, ſpecies of SAUVAGES, is the *Melancholia Argantis*, or *Maladie Imaginaire* of the French; as for inſtance, when a man believes, without any reaſonable cauſe, that he is affected with the venereal diſeaſe, or with the itch, and is miſerable in conſequence of ſuch a thought. Dr. DARWIN makes three diſtinct kinds of this ſpecies of melancholy; 1. Syphilis imaginaria; 2. Pſora imaginaria; 3. Tabes imaginaria. To me, however, it appears to be much more agreeable to the principles of Noſology to claſs theſe imaginary diſeaſes with hypochondriaſis; for, in fact, they almoſt all proceed from diſeaſed corporeal feelings, of a very obſcure kind; and hence the extreme difficulty of removing them. It is not more extraordinary that a man ſhould imagine his body to be covered with the itch, or that he is ſyphilitic, conſumptive, or impotent, than that his legs are made of ſtraw, or his head of glaſs; nor do I think that there

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is any real difference in the nature of theſe diſeaſes, for I have endeavoured to prove that the notion which is preſent in the mind of hypochondriacs, and which appears to the by-ſtander to be the cauſe of their miſery, is always accidentally excited, and if it be removed by ſtratagem, ſome other idea, totally different, but quite as erroneous, may take its place. See chapter on Hypochondriaſis.

The *Melancholia Moria*, which is the 5th ſpecies of SAUVAGES, is an hallucination of a peculiar kind, which has been already taken notice of. SAUVAGES illuſtrates it by the following celebrated caſe:

——— Fuit humo ignobilis Argis,
Qui ſi credebat miros audire tragœdos,
In vacuo lætus ſeſſor, plauſorque theatro,
Hic ubi cognatorum opibus, curiſque refectus,
Expulit helleboro morbum, bilemque meraco.
Et redit ad ſeſe: pol me occidiſtis amici,
Non ſervaſtes, ait, cui ſic extorta voluptas,
Et demptus per vim mentis gratiſſimus error.

This delirium, or rather hallucination, is the effect of a diſproportionate activity in the

reprefentative faculty of the mind, and cannot with ftrict propriety be claffed with melancholy, inafmuch as the illufive ideas are often fources of pleafure to the patient. Some people are born with a ftrong predifpofition to this difeafe; others have it gradually brought on by a fondnefs for fuch ftudies as give too much employment to the faculty of fiction, or imagination. See chapter on Genius.

The 6th fpecies of SAUVAGES is the *Melancholia Attonita*, which does not appear to differ from the more common kinds of melancholy, except in mere degree. SAUVAGES relates a cafe of it from his own knowledge; after which he gives the following defcription of the diforder. "In this fpecies, the patient "neither moves from place to place, nor changes his pofture; if he be feated, he never rifes up; if ftanding, he never fits; if lying, "he never gets up. Neither does he move his "feet except they be pufhed afide by a byeftander; he does not fhun the prefence of "men; if afked a queftion he does not an-

"fwer,

" ſwer, and yet he appears to underſtand what " is ſaid; he does not yield to admonition, " nor does he pay any attention to objects of " ſight or touch; he ſeems immerſed in " profound thought, and totally occupied " by foreign matters; at times he is more " awake: if food be put to his mouth he eats, " and if liquor be preſented he drinks. This " rare diſeaſe has never been ſeen by SENNERTUS, but JANUS, Phyſician to the ELECTOR of " SAXONY, once ſaw it in a man about thirty " years old, who was terrified with the thought " that the Deity had condemned him. This " man laboured under it during four months in " the autumn and winter, and at laſt was gradu- " ally reſtored to his right underſtanding." See SAUVAG. Noſolog. Method. Tom. 2. edit. Amſteld. 1763, p. 256.

The 7th ſpecies which SAUVAGES deſcribes, is the *Melancholia Errabunda* of BELLINI and MONTALTI. The patient, in this ſpecies of melancholy, is ſaid to be in a ſtate of conſtant motion, and at the ſame time totally abſorbed in thought, ſo as to be perfectly unconſcious

where he is going, or what he is doing. He is ſaid to be the moſt timorous of all melancholic patients; flying from the ſociety of men, frequenting ſolitary and diſmal places, ſuch as ſepulchres and church-yards. His body is deſcribed as being always emaciated and dry, his eyes ſunk in hollow ſockets, his tears dried up, his thirſt exceſſive, his tongue parched, and his colour of a citron yellow. SAUVAGES, l. c. Tom. 2. p. 256.

If there be in reality ſuch a kind of melancholy as this, which, however, is a circumſtance that may be excuſably doubted, ſince neither SAUVAGES himſelf, nor any author ſince his day, has pretended to have ſeen it; yet would n ot conſider it as a diſtinct ſpecies, but ſolely as a variety, ariſing from the intenſity of the melancholic thoughts.

The 8th ſpecies which SAUVAGES deſcribes, he denominates *Melancholia Saltans*, a diſeaſe deſcribed by MEZERAY, in his hiſtory of CHARLES V. It was ſaid to rage in HOLLAND, as an epidemic, in the year 1373. Thoſe who

were

were affected with it tore off their cloaths, and ran quite naked up and down the ſtreets, through villages and in the churches, until at laſt, being entirely ſpent, they fell breathleſs on the ground. Many of them ſwelled until they burſt, except they were bound in chains. The diſeaſe was often communicated to the ſpectators, and was ſuppoſed to originate from the patient's being poſſeſſed by evil ſpirits, and, accordingly, was cured by exorciſms!

Now, granting that there even was ſome foundation for ſuch an exaggerated ſtory as this, it is evident the diſeaſe has no claim to be claſſed with melancholy. It has not any one character of that diſeaſe. The hiſtory of many very ſingular kinds of ſpaſmodic diſeaſes, allied to the nature of Saint Vitus' Dance, are on record. The accounts which are given of theſe are often rendered remarkable by a fondneſs of the narrator for exciting wonder; and hence implicit faith is ſeldom to be given to all that is ſaid concerning them. The *Melancholia Saltans* I *conjecture* to have been of this kind.

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The next, or 9th ſpecies, deſcribed by SAUVAGES, is equally fabulous, in my opinion, as the laſt; the following is his account of it, which I give in his own words. He calls it *Melancholia Hippanthropica*, and takes the relation from the edifying letters (lettres edifiantes) of a Jeſuit called LE COMPTE.

"Sinenſis quidam perſuaſus fuerat a ſacerdotibus ſeu Bonzis, fore ut ſua anima migratura eſſet poſt mortem in corpus veredi, juſſa Imperatoris in Eliſios compos tranſlaturi; eum proinde hortabantur ad rectè currendum, abſtinendum a morſu, calcitratione, &c. Bonus ille ſenex turbulentos ſomnos vix capiebat, cum ſe ephippio inſtructum et fræno, jam ad veredarii flagrum profecturum credebat; aſt expergefactus ſudore diffluens, num equus eſſet an homo dubitabat. Converſus in Chriſtianam religionem reſipuit."

The *Melancholia Scytharum* of HIPPOCRATES, which SAUVAGES enumerates as the 10th ſpecies, was a caſe of real melancholy from impotency of a particular kind.

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The 11th ſpecies of SAUVAGES is the *Melancholia Anglica*, or *tædium vitæ*, which has been already fully deſcribed in this chapter.

The 12th ſpecies of the ſame author is the *Melancholia Zoanthropia*; but this Melancholia Zoanthropia is a caſe of mere hypochondriaſis, and by no means a very unfrequent one.

The patient either imagines himſelf an animal, and imitates the manners of it, or elſe he thinks he has animals or monſters within him; and this is the principal feature of the complaint. RAULIN, in his *Maladies Vaporeuſes*, mentions the caſe of a number of young nuns, all belonging to one convent, who thought that, at a particular time every day, they were turned into cats, and DONATUS is ſaid, by SAUVAGES, to have been a witneſs of the following curious facts. "Duos lycanthro-" pos ſe vidiſſe teſtatur Donatus ab Alto-" mari qui per avia vagabantur, cadavera " humana, aut partes eorum ſecum geſtantes; " de cætero luridos, ſiccos, aduſtos, ſitientes " eos depingit, ut locomoriam omnino refe-" rant. SAUVAGES, l. c. Tom. 2. p. 259.

The

The 13th ſpecies of SAUVAGES is the *Melancholia Enthuſiaſtica* of PAULUS ÆGENITA. This is a mere variety of that ſingular hallucination deſcribed in the chapter on Genius. The following is the deſcription and illuſtration of the complaint, as given by this diſtinguiſhed Noſologiſt.

" *Melancholia Enthuſiaſtica* PAULI ÆGENITA. *Enthuſiaſmus* ÆGRI *numine afflati. C.*

" Quidam verò etiam putant ſe ab aliquibus poteſtatibus majoribus impeti, et futura prædicere, velut numine afflati, quos etiam privatim *numine afflatos* nominat PAULUS ÆGENITA. PARACELSUS exiſtimabat ſe. in acinacis capulo ſuum azoth, ſui genium ſuum gerere. Mulieres fatidicæ, quibus ſtipat errabant Gebennenſes fanatici, ſe cœlitùs afflatas putabant, futura prædicere, abſcondita cognoſcere ſe jactitabant; has vero prophetias non prius edebant quàm epilepſiæ paroxyſmum ſimulatum paſſæ forent; itaque humi proſtratæ, mirum in modum ſe exagitabant et ad ſe reverſæ futura prædicebant." Tom. 2. p. 259.

Now

Now it is evident, from this deſcription, that SAUVAGES miſtakes ſome of the particular illuſions which have been mentioned in the chapter on Genius, for Melancholy.

The 14th and laſt ſpecies of SAUVAGES is the *Melancholia Phrontis* of HIPPOCRATES.

This is by no means an uncommon variety of true melancholy; or rather, it is a common combination of melancholy and hypochondriaſis, as is evident from the following deſcription of the patient's health. "Viſcera veluti ſpinarum aculeis pungi videntur, anxietudo ipſum invadit, lucem et homines refugit, tenebras amat, metus corripit, ſeptum tranſverſum exteriore parte intumeſcet, ad contactum dolet, expaveſcit, in ſomnis urriculamenta et formidanda cernit quandoque et mortuos: morbus hic interdum plurimos vere prehendit."

CHAPTER IV.

ON FEAR, ITS MODIFICATIONS AND EFFECTS.

Fear cannot take place without foresight. In what the predisposition to fear consists. How it is increased by experience. The difference between apprehension, dread, and terror. Upon what principles the effects of fear are to be explained. The primary corporeal effects of fear described, and cases illustrative of these related. The primary corporeal effects of terror described. Upon what principle permanent diseases, or the secondary corporeal effects of fear and terror, are produced. Cases illustrative of the diseases. Why terror, which is a modification of fear, appears, at times, to act as a powerful stimulus. Fear peculiar to certain constitutions from mere organization. The timorous disposition described. Its effects on the mental faculties. How it predisposes to insanity. Cases illustrative of this

this position. The fear of poverty, of eternal damnation, and of death, common causes of insanity with people who are born of a timorous disposition. Fear may be associated with other passions. Its character in consequence of this.

THE painful emotions of apprehension, fear, and dread are never excited in the human breast but through the medium of foresight; for, although they may arise from present calamities, as well as from past events, yet it is not the uneasiness which the calamity itself occasions that we call fear, but that which arises from what we think will follow.

The predisposing cause of fear is to be sought for in the general interest which we take in every thing that regards our own existence; like most of our passions, it may be considered as a modification of self-love: the number of our fears is increased by our experience, and by analogy; and, in this way, knowledge and reason become, at times, the enemies

enemies of human happineſs. The mere occupations of the preſent moment with difficulty command our whole attention; and, whilſt engaged in the various purſuits of the day, our mind ſeems often to ſteal away from us, and haſtening to the borders of futurity takes a rapid glimpſe of events which are to happen. Happy for us if the proſpect it diſcovers be cheerful and gay; for ſanguine expectation and hope then ariſe, and theſe beget confidence, and confidence overcomes diſtreſs and reſiſts the approach of fear. When, however, on the other hand, our knowledge of human affairs ſhews us that many of the preſent, or paſt, events of our life, are likely to be followed by calamitous conſequences; when we ſee the thick and dark clouds of misfortune gathering faſt around our head, hope and confidence vaniſh, and leave us to the torments of a paſſion, the effects of which I am now to deſcribe. But firſt let it be obſerved, that although the words *apprehenſion, dread* and *terror*, are to be juſtly conſidered as expreſſions which denote a modification of fear, yet they imply

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a confiderable difference, not only as to the caufe of fuch emotions, but alfo as to our own fenfations.

Terror arifes from the fudden and unexpected view of fome great impending danger, as when an affaffin attacks us, or when we are furprized by the appearance of a furious or ferocious animal; but apprehenfion is occafioned by an indiftinct profpect of fome diftant and very uncertain evil. When the merchant, a great part of whofe fortune is expofed to the joint dangers of the winds and the ocean, is awakened in the middle of the night with the loud roarings of a terrible tempeft, *apprehenfion* inftantly arifes in his mind; and his imagination, by reprefenting to him what may happen, fhall caufe apprehenfion to terminate in *dread*.

As every human event may be viewed from a number of different points, and the train of affociated ideas is different according to whatever fide we look from, we fee the reafon why fome men fhall regard with indifference certain objects

objects which occasion dread and terror in the breasts of others. An English sailor has been accustomed to consider a shark as a dangerous animal, from which he is safe only while in a different element; if he falls overboard, and is really pursued by one, he almost dies the premature death of fear before his enemy reaches him; but what does the savage in such a situation? he has been taught to consider the horrid animal as one which may be kept at bay by a dexterous attack, or which may be eluded by stratagem; and he acts accordingly, and often escapes from, or vanquishes the monster. How differently does the approach of death affect different people! The thoughts, which the association of ideas brings into the mind of some, when they look forward to this last and most aweful event, fill them with a dread and horror which they are unable to paint in suitable language; while others, not only look calmly forward to the termination of their existence, but seem to anticipate it with a degree of inward satisfaction and pleasure.

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The effects of fear are to be accounted for, partly on the principle of a certain powerful ſtimulus (hope) being withdrawn, partly by the ſpecific action of the ideas repreſenting the object or objects of averſion, and partly from the reaction of the bodily emotion and diſorder on the mind.

The corporeal effects of fear muſt firſt be taken notice of. The force of every action of the human body, not only the voluntary, but alſo the involuntary ones, is wonderfully diminiſhed by the ſudden influence of this paſſion; the heart does not contract with ſufficient energy to expel the whole of its contents, and the pulſe therefore becomes ſmall and quick; the action of the arteries correſponds with that of the heart, and hence there is a want of free circulation in the remote branches; this is evident from the chillneſs which is felt all over the body, from the paleneſs of the cheeks and lips, and the contraction of the ſkin.

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As the blood is naturally accumulated in the large veſſels which are in the neighbourhood of the heart, a painful ſenſe of fulneſs, oppreſſion, and anxiety is felt there. Now, when once the irritability of the heart and arteries becomes redundant during the previous diminiſhed action, which occurs on the firſt impreſſion of fear, and the blood is accumulated in its neighbourhood, it at laſt excites a preternatural increaſe of action; and of this we have a clear proof in the frequent alternations of heat and cold, and in the irregularity of the pulſe with which a perſon, who has been frightened, is affected.

The ſecreting and excretory arteries loſe their contractile force, and hence a great flow of their contents is generally a conſequence of fear. The ſweat ſtarts out in large drops on the forehead and face, and, upon the ſame principle, the perſon is often afflicted both with a diabetes and a diarrhœa. The urine which is voided by people who are under the impreſſion of fear is generally pale coloured, and always ſmall in quantity; but the deſire of

of voiding it is extremely frequent. As fear diminiſhes muſcular force, it muſt neceſſarily affect the ſphincter of the bladder; in ſuch a caſe, a very ſmall quantity of water is ſufficient to cauſe this muſcle to yield a little, and it is this circumſtance which produces the deſire. Whether the diarrhœa may not depend, in a great degree, on a ſimilar principle, is alſo doubtful; the fact itſelf is perfectly well authenticated, for many authors of reſpectability take notice of it. "It is well known," ſays UNZER, "that ARATUS, the Greek general, "was always ſeized with a purging previous "to the commencement of a battle, and it "never ceaſed until the engagement took "place." *Der Arzt*. B. 3. bl. 342.

BONETUS relates the caſe of a lady who was always ſeized with a vomiting and purging on the approach of a ſtorm, and which continued during the whole time it laſted. PECHLIN, in the third book of his Obſervations, aſſures us, that a friend of his, a certain profeſſor, TITIUS, was of ſuch a timid diſpoſition, that he was always afflicted with a tranſitory

ſitory diarrhœa before he began a lecture; and the ſame author relates the caſe of a German prince, on whom any diſagreeable tidings had a ſimilar effect. One of the foreign miniſters at his court, who would not believe that ſuch an effect could be produced by fear, was, however, convinced of his error by a ſtratagem of the court fool. The prince was then at war, and one day, while the ambaſſador was at dinner with him, the fool came running in, with a countenance full of diſmay, and aſſerted, that the enemy were approaching the reſidence. The effect which the alarm occaſioned in the bowels of the prince ſoon became very evident to the miniſter. PECHLIN, *Obſerv.* xviii. lib. iii.

A much more remarkable corporeal effect, both of fear and terror, and one which is perfectly well authenticated, is the effect it produces on the hair of the head, changing it very ſuddenly to a grey colour. BORELLI relates the caſe of a French gentleman, who was thrown into priſon, and on whom fear operated ſo powerfully, as to change his hair completely

grey

grey in the courſe of the night. Soon after he was releaſed, his hair regained its former colour. CENT. i. *Obſ.* 37. Many other caſes of this kind are mentioned by DONATUS and SCALIGER. This phenomenon is aſcribed by Dr. DARWIN to the torpor of the ſmall veſſels which circulate the fluids deſtined to nouriſh the hair, juſt as the cataract is owing to the torpor of the veſſels which ſupply the chryſtalline lens with fluids. It is evident, from this circumſtance, that many other cauſes of debility, beſides fear, may produce it; thus it frequently takes place in men who have lived a life of exceſs; it alſo occurs, now and then, in conſequence of fevers, and always in conſequence of the debility of old age.

The corporeal effects of terror greatly reſemble thoſe of fear, for terror is nothing elſe than great and ſudden fear: greatneſs in degree, and ſuddenneſs as to the impreſſion, are eſſential circumſtances in its production.

When a perſon is ſuddenly terrified, the motion of the heart is generally quickened; a kind of ſpaſmodic contraction ſeizes all the arteries, eſpecially the extreme ones, cauſing an accumulation of blood in the larger veſſels. The ſudden and forcible diſtention of the heart makes it move on its baſis, and produces that peculiar ſenſation which moſt people endeavour to expreſs by ſaying that their heart ſeems to jump to their throat. A kind of ſpaſm ſeems to ſeize the muſcles about the glottis, for reſpiration is always ſuddenly interrupted, but this is of very ſhort duration. A death-like paleneſs overſpreads the countenance, the features ſhrink, the legs and whole body are thrown into a ſtate of tremor, and the arms hang motionleſs. In ſome caſes, the debility which is produced is ſo great, as to render it impoſſible for the perſon to ſupport himſelf in an erect poſture, and he, therefore, falls down, apparently ſenſeleſs and ſpeechleſs, on the ground. In this way the ſtrongeſt man is often deprived, in a few ſeconds, of almoſt the whole of his natural ſtrength.

Theſe

Theſe primary effects of fear and terror often become the immediate cauſes of many ſerious diſeaſes.

Fear and terror, like moſt of the painful paſſions, may produce diſeaſes upon one of the three following principles:

1ſt. By the violence of the ſenſorial impreſſions, which, upon being tranſmitted to the nerves, acts like powerful ſtimuli to the muſcles.

2dly. By promoting an unnatural determination of blood to certain parts of the body, rather than to others.

3dly. By exhauſting the ſentient principle, and producing a ſtate of great debility.

1ſt. Violent ſenſorial impreſſions may act like tumors in the brain, or ſplinters of the ſkull, or extravaſations of blood, and produce diſeaſes upon a ſimilar principle; but, as the ſenſorial impreſſions are ſeldom cauſes of permanent

manent preſſure, like the former, but act by frequently recurring, or by repetitions, we ſee the reaſon why they generally produce ſpaſmodic diſeaſes. The moſt common morbid effects of the impreſſions of fear or terror, therefore, are convulſions, epilepſy, and, now and then, that very rare diſeaſe called catalepſy.

Convulſions. PLATER relates the following caſe, in his *Obſ.* lib. i. p. 36. " Some young " girls went, one day, a little way out of " town, to ſee a perſon who had been ex- " ecuted, and who was hung in chains. " One of them threw ſeveral ſtones at the " gibbet, and, at laſt, ſtruck the body with " ſuch violence as to make it move; at " which the girl was ſo much terrified, that " ſhe imagined the dead perſon was alive, " came down from the gibbet, and ran after " her. She haſtened home, and not being " able to conquer the idea, fell into ſtrong " convulſions, and died.

Epilepſy,

Epilepſy. Of fear and terror producing this diſorder, many inſtances are on record. SCHENKIUS in his *Obſerv. Medic.* lib. i. p. 128. relates, with much apparent grief, the caſe of his own wife, as a melancholy inſtance of the fatal effects of this paſſion. She was of a healthy and robuſt conſtitution, and was in the laſt month of her pregnancy, when, unfortunately, a fire broke out in the neighbouring houſe. The flames which ſhe ſaw from the window, and which appeared to be in the upper part of the houſe ſhe inhabited, together with the many vivid ſparks of burning materials which floated in the atmoſphere, and which were flying in every direction, cauſed her to conceive ſuch extreme terror, that ſhe was ſeized with ſevere epilepſy, which returning frequently, occaſioned her death in twelve hours. VAN SWIETEN, in the third volume of his Commentaries on BOERHAAVE'S Aphoriſms, p. 415, relates a caſe which demonſtrates, in a very remarkable degree, the effect of the ſenſorial impreſſions of terror. A boy was ſo much frightened by a dog leaping on him, that he was ſeized with epilepſy;

epilepſy; and when, at any time afterwards, he ſaw a large dog, or heard one barking, the paroxyſm always returned.

Catalepſy. " GEORGE GROKATZKI, a Poliſh " ſoldier, deſerted from his regiment in the " harveſt of the year 1677. He was diſco- " vered, a few days afterwards, drinking and " making merry in a common alehouſe. The " moment he was apprehended, he was ſo " much terrified, that he gave a loud ſhriek, " and immediately was deprived of the power " of ſpeech. When brought to a court mar- " tial, it was impoſſible to make him articu- " late a word; nay, he then became as im- " moveable as a ſtatue, and appeared not to " be conſcious of any thing which was going " forward. In the priſon to which he was " conducted he neither ate nor drank; neither " did he make any water, nor go to ſtool. " The officers and the prieſts at firſt threaten- " ed him, and afterwards endeavoured to " ſooth and calm him; but all their efforts " were in vain. He remained ſenſeleſs and " immoveable. His irons were ſtruck off,

" and

" and he was taken out of the priſon, but he " did not move. Twenty days and nights " were paſſed in this way, during which he " took no kind of nouriſhment, nor had any " natural evacuation; he then gradually ſunk " and died." BONETUS, *Medic. Septentrion.* lib. i. ſect. xvi. cap. 6.

2dly. The diſeaſes which ariſe from the preternatural determination of blood to certain parts of the body, are various. The caſes, which prove this aſſertion to be true, are ſo numerous, and ſo little intereſting in point of novelty, that I deem it unneceſſary to introduce particular relations of them: a ſimple catalogue of them, and the authorities, will be quite ſufficient.

a. Hæmorrhages of various kinds, eſpecially Hæmoptoe and Menorrhagia, of which HILDANUS, in his *Cent.* i. *Obſ.* 18. and TRALLES, in his *Vorſorge der Mütter*, p. 311. and SCHELHAMMER, in his *Opera*, tom. iii. par. CCCII. relate ſeveral caſes.

b. Apoplexy.

b. Apoplexy. See BECKER *Cultrovor.* WEIR *de Ira*, p. 795.

c. Sudden ſuppreſſion of the Menſes. BAGLIVI, p. 537.

d. Sudden ſuppreſſion of the Milk. MORTON, LA MOTTE, and RIVIN de Peſte.

e. "*Vires ad venerem neceſſarias frangit.*" HALLERI *Phyſ.* tom. I. p. 534. *Lauſannæ*, 4*to*. 1769. Of this effect of fear many very curious caſes are related by MONTAGNE, in his Eſſays.

f. Palſy. MORCELL DONATUS, p. 640.

3dly. Fear and terror exhauſt the ſentient power and irritability ſo completely as, in ſome caſes, to occaſion great chronic weakneſs, intermittent fevers, and even death itſelf; of which effects various caſes are mentioned by PECHLIN, VAN SWIETEN, MARCUS DONATUS, *De Med. Hiſt. Mirab.* p. 285. RHODES, *Obſerv. Medicinæ*, *Ant.* 1. Obſ. 45. and

and many others. There is one cafe mentioned by PECHLIN, which is very curious from the object which impreffed the terror. A lady of quality, he fays, who, in the year 1681, had feveral times feen, without alarm, the wonderful comet which then appeared, was one night tempted to examine it by means of a telefcope; the fight of it, however, in this way, terrified her fo much, that fhe was, with difficulty, carried fafely home, and the impreffion remaining, fhe died in a few days afterwards. Lib. iii. Obf. 23.

This is the proper place to remark, that terror has been confidered, by many authors, as a diftinct paffion from fear. They rank fear among the depreffing paffions, and terror among thofe which excite the animal fyftem to a preternatural degree of force and action. There is no doubt that many cafes feem to prove the fact, that people, when fuddenly terrified, make exertions, and execute actions, which feem much above their natural ftrength.

In regard to this obſervation, I would remark, that if the word fear be ſolely applied to the painful foreſight of ſome diſtant evil, no proof can poſſibly ariſe of its being eſſentially different, in its primary effects, from terror. On the other hand, every thing ſeems to announce a very great ſimilarity of action in both; the action of the heart and arteries is firſt greatly and irregularly excited in each of them, and then a proſtration of ſtrength and altered ſtate of feeling follow. In terror, however, the will is generally excited, becauſe the danger is immediately preſent, and the deſire of ſelf-preſervation is powerfully rouſed; but, as in fear the danger is at a diſtance, there are no ideas which excite volition, and the muſcles of voluntary action remain paſſive, and partake of the general torpor of the body. If there be no room for hope when a perſon is terrified, terror then acts like the moſt powerful fear, becauſe there are then no ideas which can excite volition; no exertion of ſtrength is obſerved; on the contrary, the perſon often falls down ſpeechleſs, or dies, or experiences ſome lingering illneſs.

There

There is a certain ſtate of the brain and nerves, which, inaſmuch as it lays the foundation for a conſtant ſeries of painful ſenſations, often prediſpoſes, in a ſingular manner, to the impreſſions of fear, and may be ſaid to conſtitute the peculiar diatheſis of the timorous diſpoſition. It is always connected with general debility of body, and it poſſibly conſiſts in a want of nouriſhment in the nerves, or, in other words, in a deficient ſecretion of medullary nervous matter; and alſo in a ſcanty ſecretion of the fine fluid which is the medium through which all nervous impreſſions are conveyed.

Every perſon, who is endowed with a ſpirit of obſervation, muſt have remarked, that certain individuals, when compared with others, are extremely diſpoſed to be frightened by very ſlight cauſes. Some people are timorous from the moment of their birth, and continue to be ſo throughout the whole of their lives; others are rendered ſo by diſeaſe and various accidental cauſes, as well corporeal as mental.

In

In both cases want of strength and energy are to be observed, and whatever increases the debility of the person augments the timorousness of his disposition. The medullary matter of the nerves not being secreted in due abundance, these organs are deficient in that degree of solidity which is necessary to modify all impressions received by them, so that they generally produce a powerful effect on the various irritable parts of the human frame to which they are transmitted, making the muscles contract as if they were convulsed. Such people are frightened at their own shadow.

When this peculiarity of constitution arises from accidental causes, as from hysteria, long attacks of dyspepsia, and certain other chronic diseases, it is generally capable of being either perfectly cured, or at least very much rectified, by means of strengthening remedies judiciously exhibited, together with a bracing good air, exercise and society. But when it is born with a person, it may be considered as one of the most serious evils which affects the happiness and tranquillity of human existence.

It may certainly be corrected, to a great degree, by a continued and patient employment of ſuch things as ſtrengthen both mind and body, that is, by properly exerciſing theſe two parts of our ſyſtem, by avoiding every thing which can produce diſturbances in them, and gradually accuſtoming the perſon to ſuch cauſes of alarm as he muſt inevitably meet with in the courſe of his life. It unfortunately happens, however, that there are but few parents, and ſtill fewer teachers, who are capable of conducting ſuch a mode of education, or who, indeed, have time for it.

The effect which ſuch a peculiarity of frame has on the mind of the perſon is too ſtriking to eſcape the obſervation of moſt people. Every object which is not familiar to the young perſon occaſions apprehenſion, fear, or dread; the tameſt, the moſt harmleſs and moſt common of all animals, or the firſt approach of a ſtranger, frighten them exceſſively. When they grow up this diſpoſition generally increaſes, and often augments to ſuch a degree as to lay a ready foundation for delirium.

Greding, in his excellent eſſay on the virtues and uſe of the Veratrum Album, relates ſeveral caſes of epilepſy, complicated with inſanity and with melancholy, which aroſe from ſlight cauſes of fear. "I. C. V: a young "man, 23 years of age, was, in his eighth "year, ſuddenly frightened by a dog; the "impreſſion recurred often, and uſed to "awaken him in the night, being then always "tormented with the idea of his being attacked by the animal. He was at firſt "ſeized with epilepſy, the paroxyſms of "which occurred every half year, but which, "after ſome time, returned every month. "He was alſo afflicted with borborygmi, want "of appetite, and violent head-ach which "diſturbed his reſt; weakneſs of underſtanding and real delirium enſued, and continued for ſeveral days together, which ſymptoms, after they had continued three years, "were followed by vertigo."

If thoſe who are of a very timorous diſpoſition, no matter whether it be born with them or accidentally formed, have their minds filled

filled with many of the ſtrange and horrid notions which are common among ignorant people, they may be conſidered as always bordering on a ſtate of inſanity or epilepſy from mental cauſes; for accidental circumſtances may give riſe to ſuch imaginary objects of terror as totally to deſtroy judgment. "I. C. B. a miner, aged 34, of a ſhort ſtature, having a great round head, and being of a muſcular fleſhy make, was brought into our workhouſe, on the 5th of February, 1770, on account of an obſtinate melancholy, which had commenced in the autumn of the year 1769, in conſequence of terror from an imaginary cauſe. When he was aſked concerning it, he gave the following account of himſelf; he ſaid that, until the laſt autumn, he had always enjoyed good health; but one day during that ſeaſon, as he was entering the ſmelting-houſe alone, a horrid, big, black human figure ſuddenly jumped on his ſhoulders, which terrified him ſo much as to occaſion his preſent diſorder." Greding, l. i. p. 35.

It is eaſily to be imagined, that the powers of reaſon are naturally weakened by habitual fear; for, as in every operation of judgment the attention muſt be confined, for a certain time, to the various ideas to be compared and from which the concluſions are to be drawn, and as the impreſſions of fear produce powerful uneaſy feelings in our bodily frame, and as all powerful corporeal feelings generally withdraw attention from objects of cool reaſon, ſo an habitual weakneſs of underſtanding, or incorrectneſs of judgment is at laſt the reſult.

But when the operations of judgment are thus influenced, by the recurrence of dreadful thoughts, as much mental derangement may follow as if real cauſes of fear had operated. It is in this way that many rich people become inſane from the mere apprehenſions of poverty. The inſtability of human affairs, and the conſequent precariouſneſs of fortune, and an injudicious anxiety about the mere expenditure of property, are among the firſt mental cauſes which give birth to the frequent returns of this kind of dread. It often ariſes, alſo, in

men

men who have been engaged in an active and lucrative bufinefs, and who injudicioufly retire from it; for fuch people, from the nature of their education, having but few refources within themfelves, continue to be much occupied about their worldly affairs; and as the conftant fpending of money is to them the fource of many painful thoughts, and, alfo, as they are deprived of the pleafure they formerly received from the profits of their profeffion, fo this kind of melancholy dread, or apprehenfion, is very apt to arife in their minds.

A perfon of a very timorous difpofition is almoft inceffantly expofed to many unavoidable caufes of pain; folitude, the darknefs of the night, a long journey which muft be executed, the common rivalfhip and enmity of mankind, the caufes of anxiety peculiar to the various purfuits of life, are all rich fources of conftant apprehenfion, and hence fuch people are very apt, at a certain period of their lives, to fink into a ftate of fettled melancholy. It is furely needlefs to obferve, that if any real and preffing calamity threatens them, from

which they think they cannot eſcape, deſpair naturally follows; from which ſuicide or murder may reſult, accordingly as circumſtances ſhall determine; as an elucidation of which poſition, the caſe of CATHARINE HAUSLERIN, narrated in the preceding chapter, may be conſulted.

The fear of eternal damnation, alſo, or religious deſpondency, and the fear of death, are to be enumerated among the varieties of the paſſion we are ſpeaking of, which give birth to ſuch melancholy and delirium as terminate in deſpair. The firſt is extremely common among the lower claſs of Methodiſts in this country, and among the Moravians in Germany. Such perſons are aweful leſſons of the imbecillity of human reaſon; they fall victims to the dreadful oratory either of enthuſiaſtic preachers, or elſe of hypocritical ones.

When fear is mixt with other paſſions, theſe, as might be naturally expected, produce peculiar effects. Fear and wonder are common aſſociations; the gloomy and aweful appear-

ance

ance of the ſky before the burſting of a thunder ſtorm, the looking down from a high precipice, the ſight of a ſtupendous cataract, or the conflagration of a city, are circumſtances which produce on our minds the united effects of fear and wonder. The countenance betrays the mixt effect by the ſtaring of the eye, the open mouth, the paleneſs of the ſkin and a cold and creeping ſenſation which overſpreads it, and by the relaxation of the features of the face.

On the mind the united effects of fear and wonder are a total want of command over the flow of our ideas; and hence one of the moſt common conſequences of ſuch impreſſions is vertigo.

Fear is ſaid to be often aſſociated with hope. The truth, however, would be better expreſſed by ſaying, that they often follow each other in rapid ſucceſſion; for, ſtrictly ſpeaking, fear is a negative of hope. When hope and fear are concatenated, ſo as to ſucceed each other quickly, they generally produce much agita-

tion

tion in our frame, especially if they be powerful; for the impressions of the one are painful, and those of the other pleasurable; and the succession of such opposite effects tends to produce different actions in the heart and arteries, and yet neither of these is permanent; the whole body is thrown into a state of tremor and general agitation, flushings of heat and cold rapidly succeed each other, the breathing is at one moment quick and full, and the next moment languid and oppressed; and this state continues until either the hope or fear becomes predominant, and the symptoms then take the character from the prevailing passion.

Fear may be combined or concatenated with other affections of the mind; but although these are interesting in a psychological point of view, yet they are very little so in a medical one, and hence they have no title to a place in this work.

CHAP-

CHAPTER V.

ON ANGER AND THE OFFENSIVE PASSIONS, AND THEIR EFFECTS.

Anger a modification of the inſtinct of ſelf-preſervation. Of what it is compoſed. Men do not commit injuries for the pleaſure of enjoying the misfortune of others, as aſſerted by HELVETIUS. *By what circumſtances a man is rouſed to anger. Difference between anger and reſentment. Digreſſion concerning the effects of anger, hatred, and revenge in ſociety. Effects of anger on the individual. Corporeal effects deſcribed. Analogy of anger to delirium. The diſeaſes enumerated to which this paſſion gives birth. Anger does not produce inſanity; but the prediſpoſition to mania ſtrongly diſpoſes to this paſſion.*

ANGER is one of the moſt powerful means with which nature has endowed us for reſiſting injury. It may be conſidered as a modification

cation of the inſtinct of ſelf-preſervation which all animals have in common with man. It ariſes from our averſion to pain. We are impelled by it, as if by an involuntary force, to acts of the greateſt violence; and in order to enable us to perform them, are made to feel as if we were ſuddenly endowed with a preternatural degree of ſtrength; every muſcle of voluntary action is thrown into a ſtate of half contraction, and the irritation is felt at the moſt diſtant parts of our extremities.

Every age, ſex, and temperament experience the force of this deſtructive paſſion; the child and the aged perſon, the ſtrong and the infirm, the phlegmatic and melancholic, the philoſopher as well as the peaſant; the ſmalleſt inſect returns injury for injury; the bee ſtings when irritated, and the viper bites whatever gives it pain.

Like every other paſſion, it is compoſed of a certain ſeries of mental perceptions, and of certain deſires which ſpring from theſe. The objects

objects which give birth to the mental perceptions are ſuch, as either immediately affect us with pain, corporeal or mental, or which we foreſee will affect us with pain if not avoided; the deſire is that of weakening, removing, or deſtroying the object which threatens us with ſuch injury.

If the principle of fellow-feeling or ſympathy tends to make us kind, benevolent, compaſſionate and charitable; the principle of ſelf-preſervation and its worſt kind of modification, ſelfiſhneſs, by making us deſirous of attaining every object which can promote our own happineſs, often occaſions us to be unjuſt, paſſionate, revengeful and oppreſſive.

Let it not be imagined, that what HELVETIUS has ſaid can be generally true; that there are men who do injury to their fellow creatures from no other motive than that of enjoying the misfortunes of others. "Il eſt des hom-" "mes malheureuſement nés, qui, enemis du" "bonheur d'autrui, deſirent les grandes places," "non

"non pour jouir des avantages qu'elles pro-
"curent, mais pour gouter le ſeul plaiſir des
"infortunés, pour tormenter les hommes, et
"jouir de leur malheurs." Diſc. iii. chap.
12. However unreaſonable and wanton the actions of ſuch men may appear to ſome people, it is certain that they ariſe from the ſame principle which prompts other men to award injury; they conſider, (falſely indeed) that the acts of violence which they commit are neceſſary to ſecure their happineſs, welfare, or ſelf-preſervation; and being, from a faulty organization of nerves, more powerfully actuated by theſe motives than what the generality of other men are, they do not examine with ſufficient caution the various ties which bind them to ſociety; and which when violated are more likely to defeat than promote the great object they have in view; their power of judging is weak, and they therefore eaſily yield to the firſt ſuggeſtions of the painful principle which governs them; a timorous man, who has either real or imaginary enemies, and who has power in his hands, will always act in a tyrannical, cruel,

and unjuſt manner towards them, becauſe he is conſtantly under the impreſſion of their doing him harm, or of their oppoſing his wiſhes. If he can remove them by any means conſiſtent with his own ſafety, he will do ſo; the painful impreſſions of the preſent moment do not permit him to look forward to future conſequences, and he therefore generally defeats his own purpoſes by his extreme violence; a brave man, on the other hand, feels a confidence in his own power, and often totally diſregards men whom he knows to be his enemies, becauſe he thinks he can at any time overcome them.

In order to prove, ſatisfactorily, that no man is rouſed to an offenſive ſtate of paſſion, but by circumſtances which either evidently affect his welfare, or preſervation, or which ſeem to him to do ſo, a ſlight analyſis of the nature of the principal exciting cauſes of anger, hatred, and revenge, will be ſufficient.

The moſt common cauſe of anger is when a man receives a real injury, or ſuppoſes he has

has received one; for the pain he ſuffers, whether bodily, or mental, makes him feel the moſt lively deſire of removing the cauſe of it. The emotions which he feels about the præcordia in conſequence of ſuch pain, and the deſire which is the conſequence of this feeling, are the principal ſources of the moſt tormenting uneaſineſs, and are the ſame in every perſon, if we except a difference in degree. The acts of volition which ariſe from the deſire are modified by the intervention of various aſſociated ideas, which give a very different character to the different acts, and they therefore receive different names. If a perſon, at the time of his receiving an injury, yields to the deſire of removing the cauſe of it, and returns pain for pain, but that ſolely with the view of making the other perſon deſiſt, by cauſing him to experience the ſame uneaſineſs which he has occaſioned, this is conſidered, by the laws of his country, and by men at large, as reaſonable, and, in many caſes, commendable anger. But if, after a perſon has deſiſted from injuring us, we cheriſh the recollection of it, and conſider him as an object of averſion, and if that averſion

ſion prompts us to injure him at any favourable opportunity, this is called reſentment, and revenge; and we are properly ſaid to be actuated by a vindictive ſpirit.

Reſentment and a ſpirit of vengeance operate differently according as they are, or are not combined with other deſires. If the vindictive perſon wiſhes to make another on whom he means to take revenge, feel his power, he finds a pleaſure in the thought of making his enemy know that the vengeance proceeds from him.

——————— " Ma vengeance eſt perdue
" S'il ignore en mourant, que c'eſt moi, qui le tue."

If the vindictive perſon is endowed with true courage, he attacks his enemy openly, and by putting him on his guard, gives him a chance of his life: if on the other hand, perſonal fear operates ſtrongly on him, and he wiſhes at the ſame time to be ſecure of the vengeance he means to take, he ſeizes an op-

portunity of executing his purpofe when his enemy thinks himfelf fafe from harm.

To attempt a complete enumeration of all the various caufes which occafion hatred, anger, and revenge, would be a vain endeavour, not only on account of their multiplicity, and the various fhades of difference which exift among them, but alfo on account of the great diverfity that we obferve them produce on different men: in fome, a very flight caufe feems to produce great turbulence of fpirits, and ebullition of blood; in others, the diforders of the body and mind never rife to any alarming degree; in fome they continue long after the exciting caufes have been withdrawn; in others they gradually fubfide, like the agitation of the waters, after the ftorm has ceafed to blow.

Among favage and uncultivated nations, the moft common exciting caufes of anger, hatred, and revenge, are the animal defires, and the remembrance of paft injuries; among civilized nations they are more numerous; for in addition to thefe may be enumerated

avarice,

avarice, pride, bigotry, ſuperſtition, love, friendſhip, the deſire of conqueſt, and the deſire of fame. From theſe ſources ſpring acts of heroiſm, and bravery, ſecret vengeance, murders, cruelty, and oppreſſion, according as accidental and incidental circumſtances ſhall determine. Of all theſe cauſes, thoſe which have been the moſt pernicious to the human race, bigotry, ambition, avarice, and the deſire of conqueſt, are the moſt prominent; for theſe have terminated, and may again terminate in the deſtruction of thouſands of our fellow creatures, in the maſſacre of whole ſects, in rebellion and civil wars, in the extermination of an inoffenſive and generous people, and in the unjuſt ſubjugation of independent ſtates, kingdoms, and empires. The ſlaughter of the Hugonots in the time of CHARLES IX. of France, and of the Proteſtants in England, under the reign of MARY; the bloody hatred and enmity of the adherents of the houſes of York and Lancaſter; the cruel conqueſts of the Spaniards in South America, in which the love of gold ſeemed to have given a metallic hardneſs to the human heart,

heart, are ſo many inſtances in ſupport of the obſervation. To the repeated operation of ſuch cauſes, alſo, we are to aſcribe the horrid characters and diſpoſitions of a CALIGULA, a RICHARD III. PHILIP the Cruel, a Duke of Alva, &c. As a medical writer, I find myſelf obliged to quit this field of inquiry, and return to the effects of this paſſion on the individual. Theſe are either corporeal, or mental; but before ſpeaking of them, it becomes neceſſary to remark, that anger muſt be divided, as to its effects, into two claſſes. The character of each may be taken from the external phenomena; in the one caſe, the face glows with heat, and is fluſhed with blood; it may be called burning anger; in the other, a deadly pale and livid hue overſpreads the face, the features ſhrink, and the ſkin is corrugated; this is pale rage.

As ſoon as the firſt of theſe is excited, the impreſſions are directed to the heart and arteries, and they are excited to a preternatural degree of action; the blood is propelled with violence to the ſurface of the body, and it circulates

circulates with force and rapidity through the ſmalleſt and moſt extreme arteries; and hence the burning heat which characterizes this ſort of paſſion. The face becomes fluſhed, the eyes ſparkling, and inflamed, and the breathing convulſed and irregular; the blood, therefore, cannot return readily to the heart, the veins in the face and neck ſwell, grow tumid, and ſeem ready to burſt. The excitement which ariſes in the muſcles from the increaſed quantity of blood that circulates through them, throws them into a commencement of contraction, and the feeling which ariſes from this prompts us almoſt as much as the ideas themſelves do, to give them full action.

In this ſtate of general diſorder of the ſyſtem, it is impoſſible the mind can receive any impreſſions but thoſe ariſing from the paſſion; it is alſo impoſſible to liſten to the general judgments which govern men at large, and the voluntary actions, therefore, become quite unreaſonable, and often injurious to others; for if all fellow-feeling, and the recollection of principles are deſtroyed by the influence of

 pain,

pain, the desire of removing the cause of it becomes so great that the means are not always well chosen. Anger, when very violent, may therefore be said to be a real delirium, not only on account of the painful ideas destroying judgment, but also on account of the preternaturally increased action of the vessels of the brain, "*Ira furor brevis est.*" Let no improper or false conclusion be drawn from this philosophical fact. Let no man condemn the punishment which society inflicts on those who yield to any criminal impulse of this passion; it may appear to be cruel in regard to the individual, but it is judicious in regard to society; for it is by restraint that the fury of the maniac is quelled; it is by opposing fear to anger, that anger is to be subdued. If the terror of public shame and punishment be associated in the mind with the excesses of anger, the one will not arise without the other, the poison and the antidote will be inseparable; and the hand that would at times have been prompted to take away the life of a fellow citizen, will be arrested by the sudden and associated thought of his own danger.

The

The more immediate corporeal effects of this paſſion which have been mentioned, often become the cauſe of much injury, and great danger to the individual. The violence with which the blood is propelled to the head, as well as to various other delicate organs of the human frame, and the difficulty of its return, which is owing to the diſordered ſtate of reſpiration, often produce ſuch an accumulation of blood as to occaſion apoplexy. "A burger of Bern, "in Switzerland, of the name of Rust, an "excellent and pious man, about fifty years "old, of a bad habit of body, and ſubject "to coſtiveneſs, happened to quarrel with "another perſon at an entertainment. In the "heat of the affray he received a ſlight blow on "the face, which increaſed the paſſion ſo much "that he fell down apparently, dead, and re-"mained a conſiderable time in this ſtate. "Upon recovering himſelf he went home, "and complained much of head-ach; never-"theleſs he ate a little ſoup, which he ſoon "vomited, together with the other contents "of his ſtomach. He then went to bed, and "ſlept tolerably well until one o'clock next

 "morning,

" morning, when he was ſtruck with an apo-
" plectic ſtroke, of which he died the ſame
" day." HELDANUS, *Cent.* vi. *Obſerv.* xi.

In other caſes, the blood having a tolerably free return, does not produce any congeſtion; but the irritation from the painful ideas, and the quickneſs of circulation, produce delirium, MORGAGNI, *Epiſt.* xxxvii. and epilepſy, profuſe hæmorrhages from the ears, noſe, and lungs, have alſo frequently occurred. Conſult PECHLIN, Lib. iii. Obſ. 25. FAB. HELDANUS, *Obſ. Med. Chirur. Cent.* i. *Obſ.* 18. and HOFFMAN, Tom. IV. part 2. p. 47, where he relates a caſe of profuſe hæmorrhage from the hæmorrhoidal veins, in conſequence of the ſame paſſion.

One of the moſt ſingular effects of anger is on the liver and its appendages. In ſome conſtitutions, eſpecially thoſe which are greatly diſpoſed to bilious complaints, a violent fit of anger is often ſufficient to produce a very diſeaſed ſecretion of bile, altering it in a ſhort time,

time, not only in quantity, but alſo in quality. The only principle on which this curious phenomenon ſeems to depend, is the well-known ſympathy which exiſts between the brain and liver; we find the ſame phenomenon take place, when an injury is received on the head, eſpecially ſuch an injury as produces a great determination of blood to that part. The fact itſelf is well eſtabliſhed, and has been obſerved by various authors of the firſt authority. The moſt common complaints produced by this diſeaſed ſecretion of bile, are violent colic pains, and bilious diarrhœa. See HOFFMAN, *Med. Syſt.* Tom. IV. part ii. p. 255. and part iii. p. 250; alſo TULPIUS, Lib. ii. cap. 20. PECHLIN, alſo, in his *Obſ.* Lib. iii. *Obſ* 25. mentions a curious caſe of an apothecary "who was of ſuch a paſſionate and iraſcible "diſpoſition, that if he had no one to quar-"rel with, would grow angry by himſelf;" and hence it happened that he was often afflicted with the moſt excruciating colic, and at laſt with a real tympany, of which he died.

In

In ſome caſes, jaundice has ſuddenly ariſen after a violent fit of anger. This may happen in conſequence of a ſpaſm affecting that part of the duodenum into which the ductus communis cholidicus empties itſelf, or by a ſpaſmodic contraction of the duct only, or by the propulſion of a biliary calculus into the ductus communis, if any previouſly exiſted in the gall-bladder.

A paſſion ſo extremely violent as this, which acts like a powerful ſtimulus to the whole ſyſtem, muſt ſoon exhauſt the irritability of every veſſel in the human body; accordingly we find that not only the greateſt diſorders occur in the various viſcera when it is exceſſive, but that the whole ſtrength is often ſo completely exhauſted as to be followed by obſtinate fainting, convulſions, and death itſelf.

If anger act in the way mentioned, it is evident that it may, at times, effect very ſurprizing cures. In all caſes of paralyſis the irritability of the muſcles of the parts affected

are

are generally accumulated, while the veſſels which ſecrete the nervous fluid are in a ſtate of torpor, and do not perform their office properly; the cauſe of the diſeaſe is leſs frequent in the head than is commonly ſuſpected. If the ſentient principle, or nervous fluid, is only ſcantily ſecreted, the ſenſorial impreſſions of volition cannot be conveyed to the muſcles of the paralytic part, and therefore theſe muſcles do not obey the dictates of the will. At a certain period of the complaint, however, when the blood veſſels of the nerves begin to be a little re-excited, the ſenſorial impreſſions of any violent paſſion, ſuch as anger, ſhall be ſo great as to paſs along the nerves, and by acting as a topical ſtimulus in its paſſage, ſhall re-excite theſe veſſels into a ſtronger degree of action, and thus cure the diſorder. It is in this way that the ſudden cure of palſy, by anger, may be accounted for, many caſes of which are mentioned by TULPIUS and VALERIUS MAXIMUS, and of which other inſtances are recorded in the *Acta Hafnienſa*.

Anger ſeldom terminates in permanent inſanity, except there be ſtrong prediſpoſition to the complaint, but on the other hand that diſeaſed ſtate of the brain which lays the foundation of mania, ſtrongly prediſpoſes to this paſſion. All the ſigns which characterize maniacal delirium, are nearly ſimilar in kind to thoſe of exceſſive rage; the expreſſions and geſtures are always violent and offenſive, the actions injurious, the eyes red and inflamed, the countenance fluſhed, ſwollen, and diſtorted, and the perſon ungovernable. See *chapter on Delirium.*

CHAP.

CHAPTER VI.

ON LOVE, ITS MODIFICATIONS AND EFFECTS.

Love is a mixed passion. Of what it is composed. Analysis of its elementary parts. Of animal desire. Of lust. Why women are more moral than men. Of the corporeal effects of this desire when restrained. The opinion that animal desire is love, and that love is the same in all animals, proved to be erroneous. The opinion that love is a pure sentiment of the mind equally false. What the moral qualities are which excite love. Whether learning in women is prejudicial to love? The most romantic love may arise suddenly. How this happens? The singularities of many love-matches accounted for. The effects of successful love on body and mind described. How benevolence, kindness, and generosity, are the offspring of love. The effects of unsuccessful love, and disappointed love, on mind and body. How it may terminate in suicide. In what cases unsuccessful love terminates in insanity. A case. How it may terminate in murder. A case similar to Mr. HACKMAN'S.

Most

I.

Moſt ſacred fyre, that burneſt mightily
In living breſts, ykindled firſt above
Emong th' eternal ſpheres and lamping ſky,
And thence poured into men, which men call love!
Not that ſame which doth baſe affections move
In brutiſh mindes, and filthy luſt inflame,
But that ſweet fit that doth true beauty love,
And choſeth virtue for his deareſt dame,
Whence ſpring all noble deeds and never dying fame.

II.

Well did antiquity a god thee deeme——

Fairy Queen.

UNTIL the age of puberty, true love is never felt in the human breaſt; and the facility with which we are affected with this paſſion generally decays in proportion as we advance beyond the meridian of life; for the fondneſſes and attachments of children of different ſexes, and the irregular deſires of old people, are not of its nature; the firſt want the inclinations which are natural to the paſſion, the ſecond have nothing but falſe deſires, ariſing from the diſorderly influence of a corrupt ſtore of looſe ideas.

Love is a mixed paſſion, founded on the one hand, on the natural deſire of the ſexes, and

and on the other hand, on desires which, although not so ungovernable as this, are more lasting in kind, and purer in their object; they are commonly called sentiments of the heart. The union of the sexes is the work of nature, and is a law which all men, in common with all animals, obey; the union of mind is not only peculiar to man, but is not even general among mankind; for it appears to be the offspring of civilization and culture: by the first mentioned desire, the great object of animal life is completed; by the second, the sphere of happiness is increased and promoted.

Of all the passions which subjugate human reason, this is, doubtless, the most irresistible in its attacks, the most insidious in its progress, and the most powerful in its effects; ambition, pride, self-love, parental and filial affection cannot enter into competition with it; it resists them all, conquers them, and has even made a sacrifice of friendship and brotherly love. But it is not the object of this work to speak of the effects which the passions

ſions produce on ſociety, but to analyze them, and deſcribe their influence on the individual. Now, in order to do this in a ſcientific manner, it becomes neceſſary to trace the origin and the nature of its conſtituent parts; and firſt, then, of the deſire of the ſexes as one of the elements of love.

As mankind may be conſidered as being at all times expoſed to animal deſire, from the ſtate of puberty until debilitated by age or exceſs, I mean when compared with the reſt of the animal world, in whom, in general, the inſtinct occurs at certain periods only; it is probable that this is the reaſon why our deſires are leſs violent than thoſe of the brute creation. No ſooner is the impreſſion felt by them than the means of gratifying it are ſought after with a degree of ardour which borders on fury. The whole frame of the animal ſeems to be actuated with new force and vigour, its motions are quick and rapid, its eyes gliſten, and its nerves ſeem to circulate fire; food is neglected, fences are broken down, the beaſts of prey become more ſavage and

and dangerous than ever, they range through the foreſts and fields, plunging into the deepeſt rivers, and traverſing rocks and mountains, to meet the objects deſtined to quell the impulſe by which they are propelled.

Tempore non alio catulorum oblita leœna,
Sævior erravit campis; nec funera vulgò
Tam multa informes urſi, ſtragemque dedêre
Per ſylvas: tum ſævus aper, tum peſſima tigris.
Heu! malé tum Lybiæ ſolis erratur in agris.
Nonne vides ut tota tremor pertentet equorum
Corpora, ſi tantùm notas odor attulit auras?
Ac neque eas jam frena virûm, neque verbera ſæva,
Non ſcopuli, rupeſque cavæ, atque objecta retardant
Flumina correptos undâ torquentia montes.
Ipſe ruit, denteſque ſabellicus exacuit ſus,
Et pede proſubigit terram, fricat arbore coſtas,
Atque hinc, atque illinc humeros ad vulnera durat.

VIRGIL. Georg. lib. 3.

Although in man, as well as in other animals, the deſire ariſes out of a corporeal feeling, yet we do not act in blind obedience to it as they do. A number of cauſes may give a different direction to our will, the impulſes of which, under ſuch circumſtances, always counteract and often overcome thoſe of animal

 deſire.

desire. In women, especially, in whom ideas of the immorality, danger, and state of degradation attending the loose indulgence of such passions are early and strongly inculcated; the desire no sooner arises to a certain degree, than by the laws of association of ideas, some of these thoughts present themselves to their minds and rescue them from danger. The early habits of restraint to which they are accustomed by a judicious education facilitate this ready change of thought, and thus tend to diminish all the impressions of loose desire, and preserve the honor of the sex. The moral education of young men being greatly different, in this respect, from that of the opposite sex, and their desires being stronger from the physical constitution of their frame, it rarely happens that they do not soon yield to the force of the internal impulse.

In regard to the influence which this desire has over the individual, as much depends on his constitution as on education; for as the physical constitution of no two men is alike, and as this desire depends, in the first instance,

on

on the action of certain veſſels which are not under the government of his will, it is evident that there muſt be a very great diverſity among men in this reſpect; ſome burn like fire, others are naturally cold as ice; and between theſe two extremes, every variety, in reſpect of degree, is to be met with. It is by no means incumbent on me, and certainly it is not my intention to dwell on theſe varieties. The one extreme already deſcribed conſtitutes luſt, the other that peculiar diſeaſe which phyſicians call *Anaphrodiſia.*

In order to demonſtrate how much luſt depends on the mere organization of man, and eſpecially on the action of a certain ſet of veſſels and glands, it may be mentioned, that circumſtances which in the generality of people damp animal deſire the moſt powerfully, produce very little effect on a luſtful perſon; fatigue of body, and a low diet, the moſt powerful of all correctors, ſeldom produce much effect; as to medicines, they are ſeldom employed without danger. If a perſon of ſuch a conſtitution is ſtrictly educated, and is

powerfully

powerfully reftrained by principles of morality, a conteft often arifes between mind and body, which now and then terminates in mental ruin or in a lingering death. STAHL, in his *Theoria Vera*, afcribes the origin of many cafes of infanity to an unnatural check being given to certain natural defires, and ZIMMERMAN, in his book on Experience, mentions a remarkable cafe of a MARQUIS DE RENTY, who refolved to abftain from all connexion with women, and who fell a victim to the experiment. GALEN remarks, that thofe who fhun every indulgence of love generally grow languid and heavy; fome are much depreffed and uncommonly melancholy, and they at laft lofe their appetite and powers of digefting. *De locis et affectis*, Lib. iv. cap. 6. FRANK, the prefent Profeffor of the Clinical Inftitution at Vienna, in his truly elegant and learned work, entitled *a Syftem of Medical Polity*, relates the cafe of a lady of his acquaintance, of a warm and amorous conftitution, who was unfortunately married to a very debilitated and impotent man; and who although fhe often betrayed, unawares, by her looks and gef-

tures

tures, the ſecret fire which conſumed her, yet from ſtrong moral principles reſiſted all criminal gratification. After a long ſtruggle her health at laſt gave way; a ſlow fever ſeized her and releaſed her from her ſufferings.

It muſt be confeſſed that ſuch caſes as theſe are by no means common, nor will any one conſider them, it is to be hoped, as circumſtances which either recommend, or juſtify the criminal indulgence to which this deſire often gives riſe; for it is an undeniable truth, that theſe may, in general, be reſiſted, not only with impunity, but with benefit to the individual.

Such is the nature and the character of that deſire by which man, in common with all animals, is impelled to propagate his ſpecies. The ſavage, unendowed with any ideas but thoſe which are connected with his own exiſtence, and thoſe which ariſe from the impreſſions of pleaſure or pain to which his body is ſubject, is governed by this inſtinct as he is governed by hunger or thirſt; he knows no

other tie which binds him to one of the oppoſite ſex. I do not ſpeak of all thoſe whom we denominate ſavages; for many of theſe, from the increaſe of population, are forced to live in ſociety, and begin to acquire the notions which are common to ſociety in general; but where no other law than that of force has any influence, we find the women reduced to the moſt abject ſtate of ſlavery, and either ſhut up for the occaſional gratification of ſenſual pleaſures, or elſe are indiſcriminately uſed by any one who feels a momentary inclination for them. If among certain ſavage tribes a ſelection of any female is made, the preference ariſes either from perſonal beauty alone, or from motives of intereſt. The women are always ſlaves, and are obliged to do the moſt laborious and meaneſt offices; no ſenſe of gratitude is ever felt for the pleaſures they beſtow; no attempt is made to render them ſervice, or augment their happineſs; neither is value ſet on any other endearments than thoſe to which luſt prompts.

Man authors, from the earlieſt times, have dignified this kind of deſire with the name of love.

> Omne adeo genus in terris hominumque, ferarumque,
> Et genus æquoreum, pecudes, pictæque volucres
> In furias ignemque ruunt: *Amor omnibus idem.*

This ſentiment VIRGIL borrowed from certain Greek philoſophers; but among that enlightened people, another ſect, equally reſpectable and learned, entertained an abſtract opinion of love, which was the very oppoſite of this; they conceived it to conſiſt intirely in a ſecret ſympathy of ſoul, which was free from all corporeal deſire. At the head of this claſs of philoſophers was the divine PLATO. Love, according to his notion, was a pure pleaſure, derived from the perfection of mind. Theſe two oppoſite opinions have flowed down the ſtream of time, through the regions of ſcience, to our days; and of the philoſophers of the preſent day, there are ſome who, like the ancients, degrade the paſſion to the rank of a mere animal deſire, while others make it conſiſt in mental pleaſures

only. Theſe concluſions, however, are not drawn from the real nature of love, but from falſe theory, or moral prejudice. The admiration of the mind, alone, does not conſtitute love, inaſmuch as the ſex of the individual is of no account in ſuch an affection; and on the other hand, the admiration of the perſonal charms of the oppoſite ſex, as it has for its object mere animal gratification, is mere animal deſire.

When we inquire into the nature of the moral qualities which, in combination with perſonal charms, give birth to the emotions of love, we readily diſcover that they are not the higher qualities of mind. It is not on account of a ſuperior memory, imagination, or judgment, that either a man or woman is beloved. Theſe, doubtleſs, may occaſion the ſentiments of reſpect, but they do not excite the fond affections of which we are treating. In regard to the female ſex, it is certain that a woman endowed with an extenſive and retentive memory like that of CYRUS, with the erudition of a GIBBON, or the judgment of a MANSFIELD, will

will rather avert than promote love by means of ſuch endowments; for there is a ſpecies of awe connected with the admiration of theſe, which damps and often forbids the familiarities to which this paſſion gives birth, and in which its moſt laſting pleaſures conſiſt. Let not the fair ſex believe, as is too commonly the caſe, that men are jealous of learning in them. Men only regret that learning ſometimes tends to deſtroy the female character, and to rob it of many of the ſofter and more endearing qualities for which the ſex is pre-eminently diſtinguiſhed. It is a lamentable truth, that the qualities of the heart, as they are commonly called, often ſuffer by the culture of the head. Affability, an amiable, uniform, and cheerful temper, elevated ſentiments uninjured by affectation, decency and elegance of manners, a correct, but not a maſculine judgment, a quick and pleaſant wit, a humane and gentle diſpoſition, a feeling heart, ſympathizing with all the gay and kinder paſſions, as well as with grief and pain; theſe are the principal moral charms which, when joined with perſonal beauty in the fair

ſex, faſcinate almoſt every heart. But theſe often ſuffer by intenſe ſtudy, and by the removal of what are called prejudices of religion and morality; and hence a certain degree of erudition, and ſtrength of mind in an equal degree, are often hurtful to love. On the other hand, I hope it is almoſt unneceſſary for me to add that, although the admiration of the higher powers of the underſtanding in women ſeldom enters into the compoſition of this paſſion, yet the neglect of theſe faculties is often a reaſon why the common exciting cauſes fail to produce their proper effect; for as every thing which is likely to create averſion, or even indifference, is a fatal poiſon to this paſſion, and as ignorance, and want of ſenſe, cannot give birth to any other ſentiments than theſe, their influence may be eaſily divined.

As love is to be conſidered as a complex ſyſtem of deſires, made up of animal deſire and the deſires which create and confirm friendſhip, the firſt muſt cauſe us to ſet a certain value on perſonal charms in the perſon we love, and the ſecond induce us to ſeek for amiable, uſeful, and laſting

ing moral qualities. Perfonal advantages, then, muft be of equal ufe to both fexes, in promoting this paffion; but the moral qualities which one fex values in another, may be different, inafmuch as the opinions of people are different; and as the wants of the two fexes which make them defire a friend alfo differ in many refpects. Both fexes require an indulgent companion, and therefore amiablenefs of temper, affability, gentlenefs, and good humour, are moral qualities which they both fet a value on; but the female requires a protector, and therefore loves in a man all the qualities which fit him for fuch an office; fhe admires him for his perfonal courage, his fortitude, and ftrength of mind, fuperior learning and abilities, and for every endowment which raifes him above the common herd of mankind. As a man does not want a protectrefs in a woman, he does not admire a female endowed with a mafculine body or mafculine mind.

It may be afked, if true love confifts in the united influence of the moral qualities mentioned,

tioned, and perſonal beauty, how it happens that it ſo often ariſes at firſt ſight?

As to the fact, it muſt be granted, that many people have become deeply enamoured the firſt moment they have beheld a certain object; and ſo truly have they been in love as not to be conſcious of having been governed by any ſenſual motive whatever, but have regarded the beloved perſon with all the idolatry which characterizes the pureſt and moſt romantic affection. If unacquainted with the perſon, (for acquaintance is not neceſſary to ſuch love) a ſecret adoration is, in ſuch caſes, often ſilently maintained for a great length of time, until occaſion by frequently preſenting the object, or imagination by often renewing the picture, inflames the paſſion to ſuch a degree, as to make the perſon incapable of acting as good ſenſe would otherwiſe dictate. Such lovers, except accident ſtrangely favours them, muſt generally be unſucceſsful, for they ſeldom wait until they ſhall have taken ſuch ſteps as to ſecure a conqueſt. Now, in regard to ſuch people, a curious queſtion ariſes, which

which is, upon what principle is this ſudden and romantic admiration to be explained? They have not, from any perſonal acquaintance, had any proof of the moral qualities of the perſon they love, and yet their love is as much founded on a ſuppoſed moral beauty as on perſonal charms.

The true explanation ſeems to be this. Every perſon is endowed, to a certain degree, with phyſiognomical ſcience, founded on the caſt of features of thoſe who reared us in our infancy, and of thoſe who have been our aſſociates through life. We think that experience has uniformly ſhewn us, that a certain caſt of features betrays a certain moral character; and this kind of judgment becomes ſo habitual to us, that we all form prepoſſeſſions, either in favour or againſt other people, at firſt ſight. If a perſon, then, of either ſex, ſhall appear to one of the oppoſite with an expreſſion of countenance which ſhall be characteriſtic to this one of the moral qualities which he or ſhe moſt eſteems, and conſequently with a countenance which awakens the moſt lively

emotions

emotions of pleaſure, and, in addition to theſe, the perſon has every advantage of external form which can pleaſe the ſenſes, it is evident that the paſſion may be immediately awakened; and when it is awakened in this kind of way, it will be equally powerful and equally pure, though not ſo reaſonable as that which is the offspring of long acquaintance. It may be further remarked, that as there has not been any experience of the perſon's real character, there is conſequently nothing which can tend to diminiſh the favourable impreſſion which was at firſt made. That great obſerver of human nature, our immortal SHAKESPEAR, has, acknowledged the influence and frequent operation of this principle, by making many of his moſt exalted lovers ſuddenly fall into the moſt romantic love, ſuch, for inſtance, as Roſalind and Orlando, and Romeo and Juliet.

This occult principle is, doubtleſs, the principal reaſon why we ſee ſo much diverſity of taſte, as it is called, which is daily exhibited in love matches. As it is not an object of underſtanding, there is, conſequently, no common principle of conviction for the judg-

ment;

ment; and it is, therefore, abſurd, and the very height of human preſumption, to pretend to decide concerning the reaſonableneſs of the affections of another perſon.

In the artificial ſtate of poliſhed ſociety many deſires ariſe, the emotions of which may occaſionally ſuperſede thoſe which are moſt natural to man. The ſingularities which theſe produce in love occur frequently; for if the gratification of ſuch deſires is more ardently ſought for than the others which are natural, they will certainly become powerful motives in the choice of a companion. There is one principle, indeed, which all mankind acknowledge to be a ſufficient cauſe of ſexual attachment: I mean perſonal charms, or a combination of beauty and elegance of form; becauſe all mankind being poſſeſſed of animal deſire, they can eaſily enter into the feelings of another, and judge of their effects when excited by ſuch cauſes; but when the principal ſource of affection is derived either from real or ſuppoſed moral qualities, there cannot, as has been already explained, be any baſis for

for general agreement; for the ſame moral qualities are differently valued by different people.

The moſt difficult part of this ſubject remains to be treated; namely, the effects which this wonderful paſſion produces on the mind and body.

As it is compoſed of ſeveral deſires, and as all deſires act as powerful ſtimuli, hence we find that, whether love be reciprocal or not, one of its conſtant features, in regard to mind, is a certain degree of inquietude, ariſing from the extraordinary exerciſe or excitement which it gives to ſeveral of the mental faculties. It is ſuperior to every other deſire, and its object, therefore, is conſtantly preſent to the fancy; hence the ſleepleſs nights which lovers paſs, hence their neglect of health and the more uſual concerns of life, their abſtraction from ſociety, their fooliſh conduct on many occaſions, and their numerous and extravagant reveries.

When

When once love is admitted, and the ſentiments of the beloved object are not known, the body partakes of the diſorder of the mind; the ſpulſe is generally accelerated, and the action of the heart becomes irregular; for the rapid changes of the thoughts from hope to doubt, and from fancied ſucceſs to fancied diſappointment, produce oppoſite effects on the circulation of blood, and flaſhes of heat are ſucceeded by chilly fits or partial ſweats. The uſual bodily feelings do not excite the attention as they formerly did, and the appetite for food is, therefore, often apparently diminiſhed; but the real fact is, the ſenſation of hunger does not reach the mind, and the food is neglected.

We naturally deſire the preſervation of that which yields us pleaſure; and hence benevolence, kindneſs, and generoſity aſſociate themſelves to love. In the deſires which ſerve for a baſis of theſe laſt-mentioned paſſions all idea of ſelf appears to be forgotten; friends, fortune, the opinion of the world, and life itſelf, are at the command of one being;

being; and we, therefore, are capable of being either ennobled or debafed by the perfon we love. This is peculiarly the cafe with women, who are very apt to embrace the fentiments of their hufbands if they continue to love them. The dependence of a lover is much more ftrongly felt by the female than by the male fex, and hence the facrifices which they make are commonly much greater, and more generous than thofe of men. I mean where women really love; for it is certain that neceffity and intereft more frequently determine their choice than thofe of men.

Succefsful love is almoft exactly fimilar to joy in its operation on the mind and body. The circulation, refpiration, and the heat are increafed, every action and movement become livelier and more eafily performed, and an increafe of animation feems to fpread itfelf throughout the whole frame. Although tranfitory doubts and terrors ftill haunt the mind, yet they are not fo frequent but that the blifs of fuccefs infpires an almoft conftant flow of pleafure. A minute defcription, therefore, of

of this kind of love need not be given here. Unſucceſsful love and diſappointed love may terminate in the ſame manner, as moſt cauſes of mental pain; the impreſſions (if the object which excited them be removed or avoided) gradually loſe their force; and judgment being therefore no longer fettered, they will at laſt be totally deſtroyed. But in certain conſtitutions, or even where the object is frequently ſeen, or the remembrance cheriſhed and renewed, inſtead of being oppoſed, deep melancholy neceſſarily ariſes, which, in ſome caſes, ſhall gradually undermine the health of the perſon, and occaſion all the ſymptoms of a ſlow remitting fever, and, at laſt, terminate in complete atrophy and waſting. In other caſes, however, in which mental irritation is impatiently borne, deſpair may ſuddenly ariſe, and this may terminate fatally in the various ways which have been deſcribed in the chapter on Grief.

Diſappointed love and unſucceſsful love are often ſaid to occaſion inſanity; but this is an effect which I believe to be a much rarer event

than

than what the world at large imagines: not that the pain of diſappointed love is not as great as that of any other cauſe of grief, but becauſe grief itſelf ſeldom terminates in permanent delirium, except there be a conſiderable degree of prediſpoſition to aberration of reaſon. One circumſtance, which has evidently tended to give birth to the opinion that love is a common cauſe of madneſs is, that when inſanity is about to break forth, both the exalted ſtate of the imagination and the increaſed ſenſibility of the body, diſpoſe to this paſſion; and it frequently happens, that the very firſt ſymptom by which the diſeaſe ſhews itſelf, is the perſon's fancying himſelf to be violently in love. As ſuch a paſſion is more frequently unreaſonable in regard to its object than reaſonable, ſo it naturally is oppoſed, or not attended to, and the refuſal or diſappointment, if it can be ſo called, produces a paroxyſm of mania. In the 5th Vol. of the *Pſych. Mag.* part 2, art. 4. there is a caſe related, which, were it not too long, might be wholly inſerted here as an elucidation of this poſition. The following, however, is a conciſe account of it. A young man

man, a Mr. H. having frequent opportunities of viſiting an actreſs of the Caſſel ſtage, who was more admired for her perſonal charms than theatrical talents, became at laſt ſo deſperately in love with her, that he offered her his hand in marriage, and made her a valuable preſent of jewels at the time he declared this intention. The lady, however, had other engagements or other views. She refuſed his offer, and returned the gift. Like a truly deſperate lover, Mr. H. flew to his miſtreſs, fell on his knees, and implored her to be more favorable to his wiſhes, and to reverſe the cruel decree ſhe had pronounced. But ſhe remained inflexible. During the warmth of the argument in which they were engaged, a man, high in rank and power, who was in the habit of paying the lady occaſional viſits, unexpectedly entered the apartment. Mr. H. was extremely agitated and frightened at his appearance, and fled from the houſe as pale as death. At the door he met one of the ſervants of the fortunate lover, and addreſſing him with much civility, he requeſted that he would not mention his name to

to his maſter; but the ſervant told him that it would be of little conſequence, as he was well known to him. On learning this he became quite delirious; threw himſelf at the feet of the ſervant, and begged of him, in the moſt earneſt manner, to uſe his influence with his maſter to obtain mercy; adding a great deal more nonſenſe ſuggeſted by the hurry of his ſpirits. He then ran home in violent agitation of mind, and paſſed the night in drinking. Such moral and phyſical violence could not be long withſtood, either by mind or body. He threw himſelf on the bed, fell aſleep, but awakened ſoon afterwards in a violent delirium; in which he talked alternately of his ſuppoſed tranſgreſſion, of the fear of being puniſhed, and of his miſtreſs. In the courſe of a few days the fury of the paroxyſm was abated, but the delirium continued, and was at laſt converted into a caſe of complete hydrophobia; of which he died on the fifth or ſixth day.

Sudden tranſitions from joy to grief are, of all cauſes of mental pain, thoſe which give the

the greateſt ſhock to human fortitude and human reaſon. What words ſhall paint the anguiſh of a lover, who, after having been buoyed up in his expectations of happineſs, by the repeated avowal of conſent in his miſtreſs, is unexpectedly informed by her, that ſhe withdraws herſelf from her engagement! What if he hears that no reaſonable ſcruple is productive of this ſudden change, but that another man, more fortunate than himſelf, is likely to poſſeſs her?

Let no frozen heart paſs judgment on the conduct of one expoſed to a ſimilar misfortune. If the feelings be acute, and the judgment not very ſtrong, a thought ariſes which appears to be the effect of ſudden delirium; the pain that is felt prompts to the removal of its cauſe; and murder follows. This is not to be conſidered as the act of love, however, but a ſudden impulſe of jealouſy or revenge. Compare the ſtory of Mr. HACKMAN and Miſs RAE with the following one, and it will be ſeen that, in the moral as well as the phyſical world, ſimilar cauſes always produce

ſimilar effects. The caſe is extracted from the *Pſych. Mag.* Vol. 5. part 2. p. 47.

In W——, a ſmall village of Saxony, there lived a poor but honeſt and upright Curate, who for many years had enjoyed, without alloy, the tranquil pleaſures of domeſtic happineſs. He had a wife and an only daughter. Content within the ſphere in which they were placed, and unacquainted with the turbulent paſſions of the faſhionable world, their days flowed quietly on in an uniform courſe of undiſturbed felicity. The mother and daughter took a joint care of all the domeſtic concerns, and ſtrove, by every conſiderate act of attention and love, to diminiſh the burthen which the duties of the good old man impoſed on him. Louisa (this was the name of his daughter) was in the ſtricteſt ſenſe of the words, the child after his own heart. He was unhappy if ſhe was abſent even for a few hours, and ſhe was therefore his conſtant attendant. Louisa was about eighteen years old, but had not yet experienced the inquietudes of that paſſion which often exhibits itſelf in very early life

life in the great world, and her principles and mode of thinking were too noble and good to inſpire her parents with even the ſlighteſt apprehenſions as to the wanderings of her heart —But hear the ſtory.

It is the cuſtom, in that country, for the cavalry to be quartered, during the time of peace, in different villages, where it is maintained at the expence of the peaſantry. Many of theſe ſoldiers are riotous young men, who, by virtue of their profeſſion and uniform, have an entrance into the houſes of all the peaſantry, and even of the curates and ſchoolmaſters. One of them, a handſome but giddy young man, was quartered at W——, where he ſoon made the acquaintance of the good old parſon.

The young ſoldier had more culture of mind than is commonly met with in ſuch a claſs of men. He pleaſed the curate; they met frequently, and often ſat up till paſt midnight, entertaining themſelves with the hiſtories of battles and warlike atchievements, of which

which each of them knew an abundance of anecdotes.

LOUISA found great entertainment in the company of the warrior, and like OTHELLO's miſtreſs, the ſtory of his life, the battles, ſieges, fortunes that he had paſt, the hair-breadth 'ſcapes, the moving accidents by flood and field o'ercame her heart. Love had taken poſſeſſion of her boſom before ſhe was aware of its approach. The progreſs of this paſſion, when once admitted into the human breaſt, is as ſwift as an arrow. She bluſhed when he took her by the hand, and was unhappy when he left her. The ſoldier could not reſiſt the beautiful girl, his heart was formed for love; they therefore ſoon came to an explanation, but carefully concealed their mutual attachment from the parents of LOUISA; for they were juſtly afraid that prudential motives would cauſe them to oppoſe it. They bound themſelves to each other, however, by an oath which at the ſame time that it ſhewed the ſtrength of their affection, exhibited the moſt romantic turn of mind. They promiſed

to marry each other as ſoon as he ſhould attain the rank of Serjeant-Major, and agreed that the one ſhould deſtroy the other who firſt failed in the engagement.

Thus matters ſtood when, contrary to the hopes of the lovers, a lawyer from a neighbouring town applied to the father of LOUISA for the hand of his daughter. He was well received, and his views promoted by the old people; but when his intention was declared to the unfortunate girl, ſhe fell in the arms of her father as if ſtruck with lightning, and upon her recovery ſhe wept bitterly, and intreated him not to encourage the addreſſes of this new lover.

Her parents, being ignorant of the true cauſe of her averſion, thought that time alone would overcome it, and they therefore gave their ſolemn promiſe to the lawyer, and reſolved to employ every means in their power to ſecond his wiſhes. LOUISA, however, reſiſted every argument and remained true to her promiſe; but her parents at laſt, growing tired

of

of her oppoſition, determined to employ their authority. The means that were made uſe of are not known, but they were attended with ſucceſs. The young ſoldier ſoon received the intelligence, and from that moment deſiſted from viſiting the parſonage. His reſolution was taken—without the girl he could not live.

A ſhort time before the marriage day a ball was given in W——, in honour of the pair. To this he reſorted, unable any longer to reſiſt the deſire of ſeeing his Louisa. He concealed himſelf among the ſpectators until he ſaw her dance; this rouſed him to a ſtate of fury; he ran home, took a pair of piſtols which were loaded, and waited until the party broke up. It was a dark night, but he diſcerned the unhappy girl and her intended bridegroom walking hand in hand. He ſtept up to her, and in a low voice requeſted that ſhe would indulge him with a moment's converſation. She diſengaged her arm from that of the lawyer, intreated him to walk on, aſſuring him ſhe would immediately return; but alas! it was the laſt minute

minute of her exiſtence: a piſtol ſhot was heard, and when her friends reached the place, ſhe was ſeen lying weltering in blood at the feet of her murderer. Now art thou mine again! cried the ſoldier, I will come immediately; and with theſe words he diſappeared, favoured by the obſcurity of the night: but he did not fly to eſcape. He delivered himſelf to the officers of juſtice who were neareſt the place, and deſired to be inſtantly executed; which event indeed ſoon followed.

"*Cætera, de genere hoc longum'ſt ſi dicere coner.*"

CONCLUSION.

1. THE phenomena of Delirium ariſe when diſeaſed perceptions are miſtaken for realities.

2. Diſeaſed perceptions ariſe from phyſical or corporeal cauſes, and from moral or mental cauſes.

3. Corporeal cauſes produce delirium, by exciting ſuch a derangement in the brain as prevents external nervous impreſſions from exerciſing their natural influence on the mind; and hence delirious people either miſtake external objects, or do not attend to them.

4. Every altered ſtate of brain which does not amount to a certain degree of deſtructive preſſure, excites, by the laws of thought, a mental

mental perception, but as the ſenſorial impreſſions of diſeaſed action are different from thoſe which are derived from external objects, ſo the images which are excited in the repreſentative faculty are alſo different. But nothing can be repreſented in the mind which has not formerly been received through the medium of the external ſenſes, or concluded by the operations of reaſoning; and therefore, all the ideas of delirious people, however different they may appear to be from any thing which has formerly been ſeen, heard, touched, taſted, ſmelt or concluded, are only new aſſemblages or combinations of prior ſenſations and thoughts. The repreſentations of delirium, therefore, are in this reſpect, like thoſe of the faculty of fiction.

4. Corporeal cauſes of delirium are of two kinds. The firſt act by altering the action of the arteries of the brain and nerves; the ſecond by yielding morbid impreſſions, which either impair, or prevent the tranſmiſſion of natural external nervous impreſſions, in their progreſs to the mind.

5. The

5. The firſt claſs of corporeal cauſes produce mania and the delirium of fevers; the ſecond, hypochondriaſis and the delirium of nervous or hyſterical patients.

6. As it has been proved, that in mania there is every appearance of a morbidly increaſed action of the veſſels of the brain, more eſpecially of thoſe which ſecrete the nervous fluid; and as all increaſe and every alteration, in the nature of this fluid, muſt increaſe and alter ſenſibility, and conſequently cauſe the ſenſorial impreſſions to act with unnatural violence, ſo the moſt ſtriking features of mania may be accounted for; as, for inſtance, the want of ſleep, conſtant raving, and fury.

7. Although it happens that mania ſhall appear, at times, to ariſe from the influence of violent paſſions, or from overſtraining the faculty of fiction, yet this ſeldom occurs except there be much prediſpoſition to the complaint; and as in ſuch caſes, and indeed in every caſe, inſanity does not occur without its being accompanied by marks of a diſ-

a diſeaſed action of the veſſels of the brain; ſo it may be concluded, that the proximate cauſe of mania is always to be ſought for in this ſtate of brain.

8. The ideas or thoughts which appear to create the mental diſturbance of a perſon labouring under mania, throw no light either on the origin or nature of the complaint; and this circumſtance forms a very remarkable diſtinction between maniacal delirium, and the delirium of hypochondriaſis and melancholy; for, in theſe laſt diſeaſes, a perſon acquainted with the human mind, eſpecially with the nature of mental perception, may often receive conſiderable light from ſuch ſources.

9. When the increaſed action of the arteries of the brain ſubſide, a morbidly weakened action of theſe veſſels is the conſequence, the nature of which it is not eaſy to aſcertain, but it is the cauſe of another delirium; which delirium has a very different moral character from that alluded to above; for the patient, inſtead of being furious, is gay and ſocial,

but

but is ſtill not governed by external objects, or reaſonable concluſions.

10. Among the moral or mental cauſes which produce delirium, grief and fear, and their modifications, are the moſt frequent; for, although every variety of pride and vanity, ambition, and ſeveral other paſſions which belong to the modifications of joy, ſeem at times to produce delirium, yet they ſeldom do ſo except by expoſing a perſon to the frequent operation of mental pain, ſuch as ariſes from neglect, diſappointment, contempt, and many other kinds of painful humiliation.

11. The painful thoughts produce dejection and deſpondency in the ſame way that corporeal pain acts; namely, by exhauſting the energy of the brain and nerves, or, in other words, by inducing a torpor in theſe veſſels.

12. The torpor and diminiſhed ſecretion of nervous fluid occaſion an inſenſibility to external objects, and to the ſenſations which accompany all natural wants or deſires; hence the

the conſtant engagement of the mind with ideal objects of pain, the ſolitude, anxiety, and deſpair of ſuch patients.

13. There are, then, three diſtinct kinds of delirium, which belong to the order of diſeaſes called Veſaniæ. Theſe may be denominated, 1ſt. *Mania furibunda*; 2dly. *Mania mitis*; and 3dly. *Melancholia.*

14. *Mania furibunda* varies according to the phyſical cauſes which excite it.

15. *Mania mitis* varies according to its moral character.

16. *Melancholia*, according to the paſſions which give birth to it, or the phyſical cauſes which induce it.

17. Independently of theſe diſorders which diſturb every faculty of the human mind, and all the external ſenſes, or rather the impreſſions received by the external ſenſes, there are others which only derange particular faculties;

 the

the action of the mind being, in other respects, in a healthy state. These which might be called partial diseases of the mind are of two kinds, 1st. Illusions; and 2d. Weaknesses of the Mental Faculties.

OF ILLUSIONS.

18. Illusions arise from corporeal causes and from mental causes.

19. Corporeal causes and mental causes produce illusions upon the same general principle that the phantoms which occur in delirium produce a conviction of their reality; namely, by occasioning such impressions as destroy, or greatly diminish the influence of external objects. It may be added here, by way of remembrancer, that the proper influence of all impressions, *ab externo*, is excited on the faculty of attention; and that when a sufficient degree of attention to any object is not given, erroneous judgment arises.

20. The impreſſions of corporeal cauſes which produce illuſion do not diſorder the healthy action of the whole brain, or its arteries; and, therefore, all external objects, aſſociations of ideas, and operations of mind, the ſenſorial impreſſions of which do not fall on the ſame part of the brain as that which receives the diſeaſed impreſſion, produce their natural effects; and the perſon, therefore, appears to think and act like a reaſonable man, except on ſuch ſubjects as have a relation to the illuſion.

21. Corporeal impreſſions, producing illuſion, generally ariſe in parts of the nervous ſyſtem which are at a diſtance from the brain; as, for inſtance, in the various viſcera of the abdomen or pelvis.

22. But all ſenſations ariſing from ſuch cauſes, whether healthy or diſeaſed, are generally referred, by a ſpecies of judgment, to the place where they are felt: and, therefore, hypochondriacs entertain falſe notions concerning their own frame.

23. The

23. The impreſſions of diſeaſed viſcera, ſuch as the ſtomach, inteſtines, uterus, liver, pancreas, &c. do not reach the brain until the healthy action of the nerves has been impaired.

24. This injured ſtate of nerves is to be conſidered as particularly affecting the ſmall arteries, which are deſtined to ſecrete nervous matter; but as the eaſy tranſmiſſion of nervous impreſſions depends on the due proportion of ſolid, as well as fluid matter, which enters into the compoſition of theſe organs, it follows, that the ſenſations muſt be greatly diſordered, and, conſequently, we find that, in hypochondriaſis, the nerves themſelves are fruitful ſources of painful feeling.

25. Hypochondriaſis, therefore, is chiefly characterized by erroneous notions relating to the patient's own frame, and by painful corporeal feeling.

26. Illuſions, from moral or mental cauſes, ariſe either from an hereditary over-activity of

the faculty of fiction, or from directing attention too much to imaginary objects, or from the influence of passions; by which means the sensorial impressions of such objects become stronger than those of external objects, and their existence, therefore, is at last more readily believed in than that of objects of external sense.

27. In no instance, whatever, do moral causes seem to produce real illusion, in such people as have no predisposition to the disease, until the healthy state of the brain has been disordered, by the unequal exercise given to it by particular objects of study or of passion. It may, therefore, be reasonably imagined, that the hereditary disposition itself consists in a morbid sensibility of that part of the brain which receives the impressions from the imagination, or faculty of fiction; and that the disorder, strictly speaking, does not exist in the mind.

28. Where the disposition to such a disease is either born with a person, or artificially produced

produced by particular objects of ſtudy, the paſſions may become exciting cauſes of ILLUSION.

29. As to the weakneſſes of the mental faculties, theſe ſeem to depend intirely on a weak, or debilitated ſtate of brain; whereby the ſenſorial impreſſions, which ariſe from the operations of mind, are not of ſufficient ſtrength and vivacity.

30. Each faculty of the mind is ſubject to ſuch impediments, and, conſequently, may appear to be weakened.

31. Upon theſe deductions is founded the following arrangement of mental diſeaſes.

Remark. In the following table the *genera* and *ſpecies* alone are mentioned; the varieties are extremely numerous, and, if they were to be defined, would ſwell the volume beyond all reaſonable bounds.

GENERA

GENERA AND SPECIES,

AND THEIR SYMPTOMS.

Clafs NEUROSES. *Order* VESANIÆ.

G. 1. DELIRIUM. General derangement of the mental faculties, in which difeafed perceptions are miftaken for realities; with incoherent language, and unruly conduct.

Species.

1. *Mania furibunda.* Delirium, with conftant raving, audacity, and fury.

2. *Mania mitis.* Delirium, with raving, and appearance of gaiety and pleafure.

3. *Melancholia.* Delirium, with dejection, defpondency, and defpair.

G. 2. HALLUCINATIO, OR ILLUSION. Error of mind, in which ideal objects are miftaken for realities; or, in which real

real objects are falsely represented, without general derangement of the mental faculties.

Species.

1. *Hypochondriasis.* Error respecting a person's own health or form, with anxiety, apprehension, and dread; flatulency, dyspepsia, palpitation, tremor, and sense of pain.

2. *Dæmonomania.* Firm belief in the immediate communication with spirits, or persuasion of the power of working miracles, without other symptoms of general derangement of mind.

3. *Vertigo.* Apparent rotatory motion of external objects, and sense of undulation in the ground, with abolished attention and thought.

4. *Somnambulismus?*

G. 3. AMEN-

G. 3. Amentia. Diminiſhed power of the mental faculties.

Species.

1. *Fatuitas.* Imbecillity of all the faculties of the human mind, particularly thoſe concerned in aſſociating and comparing ideas; accompanied with want of language, a ſtupid look, and general bodily weakneſs.

2. *Memoria imminuta.* Difficulty of recalling thoughts, and incorrectneſs as to recognizing objects formerly perceived.

3. *Perceptio imminuta.* Difficulty of forming diſtinct repreſentations.

4. *Vis idearum aſſociandi imminuta.* Deficiency, or total incapability of arranging one's thoughts; giving ſigns of confuſion of intellect.

5. *Vis*

5. *Vis fingendi imminuta.* Total want of genius, or diminiſhed genius.

6. *Vis judicandi imminuta.* Want of judgment and common ſenſe.

APPEN-

APPENDIX.

MEDICAL APHORISMS,

ON

MELANCHOLY,

AND

VARIOUS OTHER DISEASES

CONNECTED WITH IT.

BY

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Extracted and tranſlated from his Miſcellaneous Writings.

I.

IN REGARD TO THE DURATION OF THE DISEASE.

1. MANIA and melancholy have continued half a year with ſome; with others they have remained forty years and upwards; among whom one patient only, in this workhouſe, attained the age of eighty-five years*.

* AD. NIETZKI ſays, in his *Elements of Univerſal Pathology*, 1766, 8. *p.* 416. Mania is a chronic

chronic and violent delirium. The blood of a maniac always appears to be in violent agitation, and is determined with great force to the brain: hence the eyes appear of a blood red colour, and the countenance pale; the extremities of the hand and feet are ſo warm that the greateſt cold is not felt, nor does any bad conſequence flow from their being expoſed to it. In the looks of a madman ſomething daring is to be diſcovered, and his actions are either wilful or cruel. If maniacs are attacked with convulſions, the paroxyſms ceaſe, and are followed by an almoſt total inſenſibility, or extraordinary proſtration of ſtrength. In the ſame work, he defines Melancholy to be a chronic delirium; and aſſerts, that thoſe are moſt expoſed to it who have long laboured under Hypochondriaſis and Hyſteria, and thoſe whoſe abdominal viſcera have been injured, whoſe meſenteric glands are hard, and in whom the healthy ſecretions are ſuppreſſed: thoſe who are eaſily ſubdued by paſſion, who over-exert their mental faculties, who are born of melancholic parents, who have too thick blood, which through various cauſes is accumulated in the head. Such patients have cold feet and hands, their countenance is pale, and they are ſubject to palpitation of the heart

and

and to a ſenſation of anxiety. Their reſpiration is deep and laborious, they are troubled with head-ach and giddineſs, their cheeks and lips red, their eyes full of tears, and their ſleep diſturbed. Their actions accord with their ideas, which are either horrible or agreeable; their natural ſecretions are either totally ſuppreſſed or go on with difficulty: when a vein is opened a black blood flows ſlowly out of it.

Upon inſpecting their dead bodies, the veſſels of the head are found diſtended with dark coloured blood, and the ſerum is diſcovered to have been effuſed between the membranes of the brain. Some parts of the brain are elevated, hard and dry, and the gall is uncommonly thick and black.

Ann. Charles Lorry, *de Melancholia et Morbis Melancholicis*, 1765, 8. tom. 1. p.2. ſays, " Melancholy is that imbecillity of the mind which ariſes from a vitiated ſtate of the body, in which we are powerfully affected by objects which are either without us, or are the effects of imagination; ſo that it is impoſſible to reſiſt the ideas which ſpring from them, or to withdraw our thoughts from

from them." He aſſigns three cauſes for this diſeaſe. The firſt he aſcribes to the leek green bile, the ſecond to an acrid mucus, and the third to a mixture of all the humours with the blood.

Meckel, in his *Anatomico-phyſiological Reſearches* into the cauſes of the various kinds of inſanity which have their ſeat in the body, (See Memoire de l'Academie Royale des Sciences et Belles Lettres, Année 1764, a Berlin, 1766) ſays he has diſcovered, by the moſt careful and accurate experiments, that the ſpecific gravity of the brain of a maniac, or melancholic patient, is very different from the ſpecific gravity of the brain of a ſane perſon. A cube of ſix lines of the brain of a healthy man, weighed one drachm and four, or at the moſt, ſix grains, (ſome difference, however, is obſerved to ariſe from the different diſtention of the blood veſſels). But in maniacs, and melancholic patients, the brain is generally harder, drier, and more elaſtic, and weighs ſpecifically ſeven drachms. (Memoires de l'Academie de Berlin, tom. xx. p. 75.) In addition to this generally diſeaſed ſtate of brain, (namely, the increaſed hard-

neſs,

neſs, dryneſs, and elaſticity), particular or local alterations may alſo occur; as for inſtance, the formation of ſtony matter in any part of the brain. Such diſeaſes ariſe either from a congeſtion of lymph, or from ſharp blood, and great determination of it to the head; or from compreſſion of the brain, or from pus irritating the brain, or from an irritation of the nerves called *par vagum*. Notwithſtanding what has been ſaid, the brain of maniacs and melancholic patients, has often been found not to be harder, dryer, or more elaſtic than uſual. (See *Adverſar. Med. Pract.* Lipſiæ, 1769. 8. vol. ii. p. iii. pag. 534. *et ſeq.*)

Gerard Van Swieten. *Commentar. in Herm. Boerhaave Aphoriſmos de cognoſcendis et curandis Morbis*, Lug. Batav. 1753, 4. tom iii. p. 519. *de Mania, et* p. 459. *de Melancholia.* Leop. Avenbrugger, *Medicinæ Doctoris, quondam in Noſocomio Cæſareo Regio, Nationum Hiſpanico, et Militari Medici primarii, Experimentum naſcens de Remedio ſpecifico, ſub ſigno ſpecifico, in Mania virorum*, Viennæ, 1766. 8. Tho. Willis *opera omnia, a Gerard Blaſio*, Amſtelod. 1682, 4. p. 167. 179. John Bapt. Morgagni *de Sedib. et Cauſis Morborum per Anatomen. indagatis libri quinque,*

quinque Venet. 1762, JOH. C. BEUTEL, *de Mania*, Jenæ, 1648. § xxix. *Frankiſche Sammlungen von Anmerkungen aus der Naturlehre, Arzneigelahrheit, Oekonomie und den damit verwandten Wiſſenſchaften, th.* 5. Nurnburg, 1760, 8. p. 23, 294. HERMAN BOERHAVII, *Prælect. Acad. de Morbis Nervorum a Jac. v. Eems.* Lugd. Batav. 1761. tom. ii. p. 444 et 445. *Medicina dogmatica tres Morbos particulares Delirium Vertiginem et Tuſſim aphoriſtice conſcriptos exhibens Auct.* T. DE GORTIS, Harderov. 1741, 4. p. 5, § 5.

2. There have been only two, who as experience teſtifies, have died mad when young. The one, who was very much deranged and furious, and was born of a melancholic mother*, died in his nineteenth year; the other, who had been afflicted with inſanity for ſix years uninterruptedly, finiſhed his life in his twenty-ſixth year.**

* LORRY loco citat. 2 part. cap. 3. p. 284. appears to have ſpoken rather too raſhly, when he aſſerts that no man was ever born mad or melancholic; for it is very well known, that many are idiots from birth, of whom there are too many in our workhouſe at Waldheim; and

and, independently of this, I myſelf know a caſe of a child having been abſolutely born mad. A woman about forty years old, of a full and plethoric habit of body, who conſtantly laughed and did the ſtrangeſt things, but who, independently of theſe circumſtances, enjoyed the very beſt health, fell, about twelve or fourteen years ago, after a ſevere and tedious labour, in which ſhe was delivered of a daughter, into very great weakneſs of underſtanding. This gradually increaſed, and, during the laſt war, ſhe one day entered the foreſt, in company with her daughter, to fell a tree: owing to her want of foreſight, the tree ſtruck her daughter, and deſtroyed her in a ſhocking manner. A ſhort time before her huſband's death ſhe became pregnant, and, on the 20th of January, 1763, was brought to bed, without any aſſiſtance, of a male child who was raving mad. When he was brought to our workhouſe, which was on the 24th, he poſſeſſed ſo much ſtrength in his legs and arms, that four women could, at times, with difficulty reſtrain him. Theſe paroxyſms either ended with an indeſcribable laughter, for which no evident reaſon could be obſerved, or elſe he tore in anger every thing near him; cloaths, linen, bed furniture, and even thread

when he could get hold of it. We durſt not allow him to be alone, otherwiſe he would get on the benches and tables, and even attempt to climb up the walls. Afterwards, however, when he began to have teeth, he fell into a general waſting or decline, and died.

** J. N. ZIMMERMAN, in his work on Experience in Medicine, Zurich, 1768, 8. p. 263. mentions the caſe of an inſane woman, who, a few hours before her death, became perfectly ſenſible and wonderfully eloquent; and, therefore, he conſiders the ſudden return of reaſon in a melancholic perſon as a forerunner of inſanity. See alſo CHR. GOTTL. LUDWIG. *de Plethoriæ differentiis*, Lipſiæ, 1766, 4. p. 9. § 5.

3. Thoſe who are afflicted with epilepſy ſeldom attain an advanced age; ſome have terminated their exiſtence in their nineteenth year, others, who were not attacked by the ſame diſeaſe till they were advanced in life, have lived until the age of fifty or ſixty *.

* HERMAN BOERHAAVE ſays, in his Aphoriſms, that epilepſy is a total abolition of conſciouſneſs,

ſciouſneſs, and an incapability of receiving impreſſions through the means of the external ſenſes, accompanied with powerful and involuntary convulſions of all or moſt of the muſcles. See GER. V. SWIETEN, l. c. 3 part. p. 391. JOH. OOSTERD. SCHACHT, *Inſtitutiones Medicinæ practicæ ad auditorum potiſſimum uſus in epitomen redactæ et evulgatæ*. Traj. ad Rhenum, 1767, 4. p. 64. ſays, epilepſy is a convulſive motion of moſt of the muſcles of the body, together with a ſudden projection of the body on the earth, and a temporary abolition of conſciouſneſs; ſo that a perſon is deprived of the uſe not only of his internal, but alſo of his external ſenſes. The cure, he ſays, depends on three things: 1ſt. The approaching paroxyſm is to be avoided; 2dly, the preſent one muſt be alleviated; and 3dly, all returns muſt be prevented.

E. I. P. HOUSSET *Diſſertation ſur les parties ſenſibles du Corps Animal, &c.* Lauſanne, 1770, 8. derives the origin of this complaint, not only from a diſordered ſtate of the various viſcera which are neceſſary for the concoction of food and chylification, but alſo from a preternaturally inſpiſſated ſtate of the fluids; which two cauſes are ſo intimately connected, that the one always lays the foundation of the other; when,

when, therefore, there is no proof that the disease arises from any other cause, as from a bad formation of the head or a stony concretion in the brain, or from extravasated blood, recourse must be had to mercury as the best resolvent. Boulet considered the pituitary gland as the seat of the disorder, because he once found it in the body of a person who had laboured under this complaint, as big as an egg, and nearly two thirds filled with pus. See also *Histoire des Maladies de St. Domingue, par* Mons. Pouppe Desportes, Paris, 1770, tom. ii. p. 209. Ant. de Haen, *pars quinta rationis modendi in Nosocomia practico, &c.* Viennæ Austriæ, 1763. 8. *Diss. de Ustione Cranii in Epilepsiæ præs.* A. F. Delio, *Auctore,* Jo. Ph. Iv. Rudolph. *Erlang,* 1768. 4. Also Max. Locheri *Observationes practicas circa Luem Veneream, Epilipsium et Maniam, tria morborum genera in Nosocomio ad St. Marcum, præ aliis maxime olvia, &c.* Viennæ Austriæ, 1762. 8. and Thom. Willis, *Opera omnia, a* Gerard. Blasio. *p. tractatus primus de Morbis convulsivis, cap.* i. *p.* 40. Jo. Baptist Morgagni, *de Sedibus et Caussis Morborum, &c. tom.* i. *epist.* ix. *p.* 133.

4. Those also who are born idiots seldom attain an old age, as experience proves. Some have

have lived to the age of nineteen; one perſon only died when forty-one, another lived to the age of fifty-four, and another lived to the age of fifty-nine*.

* Meckel, in his Anatomical Obſervations on Scirrhus Tumours and Ulcers of the Brain, (*Hiſtoire de l'Acad. Royale des Sciences et Belles Lettres, Anne* 1760. *à Berlin*, 1761, 4.) mentions the caſe of a fatuitous female, and aſcribes the cauſe of the diſeaſe to a ſcirrhous gland which he found in the brain. He thinks that the nervous fluid was obſtructed in the long and debilitated veſſels of the left ſide of the brain, and in the medullary ones of the right ſide, which were compreſſed; the convulſions were produced, according to him, by the irritation of a ſharp acrid ſerum. See Thom. Willis *de Anima Brutorum*, p. ii. cap. xiii. p. 137.

II.

OF THE MANNER OF THEIR DEATH.

1. THE greater number of inſane people fall into a ſtate of atrophy or decay towards the cloſe of their life; for it has been found, that

that of one hundred maniacs ſixty-eight died in this way; of twenty-ſix epileptic maniacs there were thirteen; of ſixteen epileptic idiots only four; of twenty who were purely epileptical, there were eleven; and of twenty-four melancholic, there were twenty; and laſtly, of thirty idiots, there were twenty-one who died of this kind of conſumption.

2. Hydrothorax appears to be the diſeaſe to which they are moſt ſubject; for we have found, that of one hundred maniacs there were ſeventy-ſix; of twenty-ſix epileptic maniacs nine; of ſixteen epileptic ideots ten; of twenty purely epileptical, eight; of twenty-four melancholic patients, there were twenty; and laſtly, of thirty purely idiotical there were eighteen, in whom the thorax was found full, either on one ſide or in both of a fluid which was either of the common yellow colour, or of a bloody colour; and, now and then, of a fluid which was extremely ſtinking and offenſive.

Yet,

3. Yet, notwithſtanding theſe appearances, Dyſpnœa and Aſthma are more rarely met with among ſuch people, than what might be reaſonably ſuppoſed; of one hundred maniacs, as experience has ſhewn us, there were only ſixteen who laboured under ſuch diſeaſes; and of twenty-ſix epileptic maniacs there was not one who had any ſymptom of dyſpnœa. Of ſixteen epileptic idiots there were, however, five; of twenty purely epileptic, four; of twenty four melancholic twelve; and laſtly, of thirty idiots eleven, who laboured under theſe complaints.

4. Conſumption, from an ulcerated ſtate of the lungs, appears to be another diſeaſe, which often terminates the exiſtence of inſane people; for it has been found, that of one hundred maniacs there were forty who laboured under Phthiſis pulmonalis; of twenty-ſix epileptic maniacs, eight; of ſixteen epileptic idiots, four; of twenty purely epileptic patients, ſeven; of twenty-four melancholic perſons, twenty; and laſtly, of thirty idiots, there were fifteen conſumptive. The lungs of all

theſe

thefe were found to have feveral ulcers; fome having a great number, others fewer. One may fairly conclude, that of four fuch patients, three are completely confumptive, and of thefe the greater number are melancholic patients.

5. Maniacs and melancholy lunatics, who in general are much troubled with coftivenefs in the commencement and progrefs of their malady, are, in the end of their days, of all other people the leaft frequently affected by it; for, among the whole number of the infane, there were only three maniacs who were affected by it, and of thefe there was one who had it only occafionally. Among a hundred maniacs, there were thirty who laboured under a diarrhea. Of twenty-fix epileptic maniacs, there were five; of fixteen epileptic idiots, four; of twenty purely epileptic, fix; and of twenty-four idiots, eleven; all of whom had this complaint.

6. Afcites is by no means a common complaint with fuch patients. Among the whole number,

number, there were only forty-five who had either water or purulent matter in the abdomen; and in many of theſe the quantity was very ſmall, and did not deſerve to be conſidered as conſtituting dropſy. Of one hundred maniacs there were only ten who had this diſeaſe, and in ſeven of theſe the ſerous fluid had a very offenſive ſmell. In the three others, it was ſmall in quantity and of the natural quality. Of twenty-ſix epileptic maniacs, there were four in whom a quart (eine kanne) was found. The other three had very little fluid in the abdomen. Of the ſixteen epileptic idiots, there were two; of the twenty epileptic, three; of the twenty-four melancholic ones, ſixteen; and of thirty idiots ten, who laboured under this complaint.

7. Few inſane people die in convulſions; for it has been remarked, that of one hundred maniacs, there were only ſix who died of general convulſions; of twenty-ſix epileptic idiots, fourteen; of twenty purely epileptic, ten; of twenty-four melancholic, not one; and

and of thirty idiots, only two, to whom this happened*.

* ANT. DE HAEN, *Rationis medendi in Nosocomio practico*, part 3. Vendob. 1760. 8. p. 198. says, that the nature of convulsions consists of an alternate apoplexy and preternatural motion; for the causes of the disease are suddenly sent to the brain, and occasion contractions of the muscles; but, in the moment that the brain becomes more loaded, they are thrown into the very opposite state. *Comment. secund. de Motibus Cerebri, Auctore* LORRY, *in Memoires de' Matematique et de Physique, presentés a l'Acadamie Royale des Sciences, &c. tom.* iii. Paris, 1760. 4. *Nosologia Methodica sistens Morborum classes, genera et species, juxta Sydenham mentem et Botanicorum ordinem: Auct.* F. B. DE SAUVAGES, 1763. JO. OOST SCHACHT, *l. c. p.* 64.

8. If convulsions are rare occurrences among the insane, sudden deaths are still more so. Among one hundred maniacs, there have been but ten who have died suddenly and unexpectedly. Among twenty-six epileptic maniacs,

niacs, there have been four; and among ſix-teen epileptic idiots, two; of twenty purely epileptic patients, there have been three; of twenty-four melancholic perſons, eight; and of thirty idiots, only three; who have departed this world in this way*.

* LORRY, in his work already mentioned, ſays, he has not been able to diſcover any other cauſe for ſuch an event than the diviſion and preſſure of the medulla ſpinalis, eſpecially in that part which, in new-born animals, is between the third and fourth vertebral proceſs, but which, in adults, lies between the firſt and third.

JO. BAPTIST. MORGAGNI *de Sedibus et Cauſis Morborum, per anatomen indigatis quinque*, Venet. 1762. p. 10. *ſeq.* GER. VAN. SWIETEN, *in the work mentioned, tom.* iii. § 1077. *p.* 427.

9. Inſane people are as ſeldom attacked with rheumatiſm or gout, or any other painful diſorder, as they are with convulſions or ſudden deaths. Of one hundred maniacs, there were eight; of twenty-ſix epileptic maniacs,

niacs, not one; of ſixteen epileptic idiots, three; of twenty epileptic patients, none; of twenty-four melancholic perſons, four; and of thirty idiots, three, who were affected by ſuch complaints.

10. All the other diſeaſes are ſtill more rare than theſe; for it has been found, that in all the number of years in which many malignant epidemics have prevailed, no more than five inſane people have fallen victims to them; and, indeed, of theſe five two only can, with certainty, be pronounced to have died of ſuch complaints. One died of a continued fever, and another of a catarrhal one conjoined with exceſſive delirium.

11. A caries of the bones is a circumſtance which is almoſt never to be met with among ſuch patients; for, of all the number, three only were affected by it. Hardened and enlarged glands, ſwellings, and the cancer, are full as rare; for, of theſe, two only have died from ſuch affections. One of theſe had a profuſe hæmorrhage, from an injury he received,

and

and another experienced, a ſhort time before his death, a profuſe hæmorrhage from the rectum.

12. In the whole number of our patients, two only have died of mortification; two loſt their lives from encyſted tumors, and one from a ſteatome and foul ulcer, which occupied the whole of the right leg. A ſtone in the bladder, and a total inability of retaining the urine have only been once obſerved.

I.

ON THE SIZE OF THE HEAD.

IT does not appear that either too large or too ſmall a head contributes to the production of this diſeaſe; for it has been obſerved, that in a number of one hundred mad people, there were only four whoſe heads were too large, and only two with heads of the very ſmalleſt kind. Among twenty-ſix epileptic inſane people, there were four: and among ſixteen epileptic idiots, two; whoſe heads appeared too ſmall. Among twenty epileptic, and four and twenty melancholic patients, there were none;

none; and among thirty idiots, two; with very ſmall heads. Six only had large ones*. The heads of all the others were of an ordinary ſize.

* HERM. BOERHAAVE, in his work, *De Morbis Nervorum*, Lugd. Bat. 1761. 8. p. 125. aſks this queſtion: Have not idiots larger arteries in the brain than other people? It is at leaſt found, that they have larger heads; but this cannot be conſidered as being generally true.

II.

OF THE STRENGTH AND WEAKNESS OF THE SKULL OF INSANE PEOPLE.

IT is very remarkable, that the ſkulls of the greater number of ſuch patients are commonly very thick; nay, ſome have been found of a moſt extraordinary degree of thickneſs. Among two hundred and ſixteen patients of this deſcription, whoſe bodies were inſpected after death, there were found one hundred and ſixty-ſeven whoſe ſkulls were unuſually thick,

thick, and only thirty-eight thin ones; among which laſt number there was one which was much thicker on the right ſide than on the left. But in particular it was obſerved, that among one hundred raving madmen, ſeventy-eight had very thick ſkulls, and twenty very thin ones; among which ſkulls there was one quite ſoft. Among twenty-ſix epileptic raving madmen, there were nineteen found with very thick ſkulls, and four very thin; among ſixteen epileptic idiots there were fourteen, and among twenty epileptic patients, ſixteen who had very thick ſkulls; among whom there was one diſcovered, one ſide of whoſe ſkull was thick and the other thin. Among twenty-four melancholic patients, there were eighteen with very thin ſkulls; and laſtly, among thirty idiots, twenty-two with very thick, and ſix with very thin ſkulls. All the others had ſkulls of a natural thickneſs.

III.

ON THE SHAPE OF THE SKULL.

1. EXPERIENCE has proved, that the ſkulls of almoſt all inſane people are of a natural ſhape; for ſixteen only have had ſmall and contracted foreheads, compreſſed temples, and large and expanded *occiputs*. A few appeared to have the head too long and compreſſed at the temples. Some had a head almoſt round, or of a ſquare ſhape; theſe were epileptic idiots. Two others, who were epileptic madmen, had ſmall heads, which were quite circular, but of a natural degree of ſtrength*.

* In ERN. PLATTNER'S *Specimine ſecundo de Vi Corporis in Memoria*, &c. Lipſiæ, 1767, 4. p. 11. A number of caſes of the preternatural formation of the head are to be found; ſome had the *os frontis* and the *os occipitis* very flat and compreſſed; others, in whom the *os frontis* was only about ſix fingers broad, had the brain quite ſhrivelled up, but broad in the front, and ſo contracted towards the back part of

of the head that it was ſcarcely bigger than a common quill.

2. Beſide theſe preternatural caſes, many other particulars have been detected in the ſkulls of ſuch patients. In ſome the bones were quite blue, or appeared as if full of blue ſtreaks*. The parietal bones of ſeveral epileptic idiots were found to be uncommonly thin towards the anterior and upper angle, in the middle of which thin ſpot a ſmall hole was diſcovered. Another epileptic patient had that portion of the ſkull, which ſurrounds the union of the ſagital and coronal ſutures ſo depreſſed, in conſequence of a blow ſhe had received in her early youth, that it formed a tumor on the inſide of the head as large as a walnut**. In the ſkulls of ſome other idiots there was not the ſlighteſt trace of a ſuture to be diſcovered***. And in the ſkull of a raving madman, aged thirty-five, the *os frontis* was divided down to the noſe by the ſagital ſuture, as is now and then obſerved in children.

* HERM.

* Herm. Boerhaave *de Morbis Nervorum*; *a* Jo. van Eems. Lugd. Bat. 1761. p. 16, 17. 26, 27.

** Herm. Boerhaave, l. c. p. 41 and p. 10. Gerard. von Swieten, loco cit. 1 part. § 267. p. 432. and alſo § 244. p. 398, 399. where, among other caſes, he relates a ſingular one of a woman, who loſt near the half of her ſkull by an accident. She was a beggar, and carried the piece of ſkull with her from houſe to houſe. If the finger was gently preſſed on the *dura mater*, ſhe ſcreamed aloud, and ſaid ſhe ſaw a thouſand lights.

*** V. Swieten, 1 part. § 7. p. 10. § 255. p. 416. and § 267. p. 434. relates the caſe of a child about eight years old, in whoſe ſkull there were no traces of the ſagital and coronal ſuture, either on the external or internal ſurface. This circumſtance has alſo been met with by Hunauld, (Acad. des Sciences, l'an 1734. Hiſt. p. 59.) who, on this account, does not conſider it as a rare occurrence.

3. Not only a number of ſingular variations in the form and qualities of the ſkull of ſuch patients are frequently obſerved, but we alſo

ſee

ſee a great number of holes in its inner table, which in ſome caſes are very large, and in others very ſmall. Out of two hundred and fifteen patients, there were one hundred and fifteen whoſe ſkulls preſented this curious appearance; but of theſe there were eight in whom the holes were very ſmall, and few in number. Upon the whole, however, of one hundred maniacs there were forty-nine; and of twenty-ſix epileptic maniacs, eighteen; of ſixteen epileptic idiots, eleven; of twenty purely epileptical, ten; of four and twenty melancholic patients, ſix; and of thirty idiots, twenty-one; in whoſe ſkulls ſuch holes were detected. Out of all this number, there was only one epileptic patient, who had ſix remarkably large holes of this kind in the ſkull.

4. Other phenomena obſerved within the heads of ſuch patients are broad and thick bony projections on the inner ſurface of the ſkull, which generally extend from the petrous part of the temporal bone, to the cruciform proceſs of the occipital one. See

HERM.

Herm. Boerhaave, in the book quoted, part 1ſt. p. 141. and alſo Ernest Plattner, in the work mentioned p. 31. et ſeq.

5. Upon inſpecting the heads of the inſane, the *dura mater* is often found to adhere, with a preternatural degree of force, to the ſkull. Of two hundred and ſixteen, whoſe heads were opened, there were one hundred and ſeven, in whom a very great force was required to detach the ſkull from the membrane mentioned. Some of theſe patients indeed were old, but by far the greater part of them were between twenty and forty years of age.

IV.

OF THE DURA MATER.

HOWEVER ſtrongly the *dura mater* may be found to adhere to the ſkull, yet there is often found a quantity of a watery fluid between the two. In ſome it was in ſuch great quantity as to flow copiouſly out from the baſis of the ſkull as ſoon as the ſuperior part was taken of. See Herm. Boerhaave, l. c, 1 part,

1 part. p. 27. 28. 31. and 127. Alſo ERNEST PLATTNER, § 19. p. 41, 42. and § 17. p. 37.

2. The number, however, of thoſe in whom collections of a watery fluid have been detected, between the *dura* and *pia mater*, ſurpaſs the others by a great many; for, among two hundred and ſixteen perſons, there were one hundred and twenty who had more or leſs of this kind of ſerous fluid between theſe two membranes. To be more explicit, of one hundred maniacs, there were fifty-eight; of twenty-ſix epileptic maniacs, thirteen; of ſixteen epileptic idiots, eight; of twenty epileptic patients, twelve; and of four and twenty melancholic ones, ſixteen; and laſtly, of thirty fatuitous patients, thirteen; in whom this phenomenon was obſerved to have taken place. In ten of theſe patients it had a red colour, and in five it appeared as yellow as ſaffron; and this colour had dyed the *dura mater* of a deep yellow. Three of the patients had the *dura mater* of a black violaceous colour; and it was alſo found in them to be very much thickened

and

and covered with mucus. In five of theſe caſes ſeveral parts of the membrane were oſſified*.

* HERM. BOERHAAVE, l. c. 1 part, p. 147, 148. 150. 154. 155. and alſo p. 29, 30. 53, 54, 55.

3. In the longitudinal ſinus, which was not examined accurately in more than one hundred patients, a number of true *polypi* were found in fifty-eight of them. Of theſe polyps ſome were of a conſiderable thickneſs and ſtrength. In particular, however, there were among forty-two maniacs, twenty-two; among fifteen epileptic maniacs, eight; among ten epileptic idiots, ſeven; among twelve epileptic patients, eight; among fifteen melancholic, ten; and among ſix idiots, four; in whom true polyps were detected in the longitudinal ſinus*. In other reſpects we have to remark, that the glands of PACCHIONI have never been found ſo much enlarged as MECKEL deſcribes them. Moſt of our diſſections correſpond, in other reſpects, with the ſeventh of

of Dr. MECKEL, and alſo with the eighth, in reſpect of the enlargement of the brain*.

* HERM. BOERHAAVE, loc. cit. part i. p. 141.

4. The *dura mater* was found, in ſome caſes, to have *foramina*, or perforations, which correſponded with thoſe of the inner table of the ſkull, ſo that the ſpungy bodies of the *pia mater* and ſubſtance of the brain appeared; of which more will be ſaid hereafter. To theſe ſaid ſpongy ſubſtances the *dura mater* was often found firmly adhering, eſpecially under the *os frontis* and the *vertix**.

* HERM. BOERHAAVE, loc. cit. part i. pag. 73. 85.

5. In ſome epileptic idiots there were found, on the left wing of the tentorium, near to the ſkull, a ſmall protuberance of the ſize of a ſtrawberry. It felt very ſuperficial, and was covered with a ſtrong membrane, which without doubt was an elongation of the *dura mater*.

Internally

Internally it was found to be a ſtony or bony excreſcence, which might eaſily have irritated the poſterior lobe of the brain; but of this there was no proof*.

* See *Diſſ. Inaug. de Epilepſia, Auct.* J. C. Fasch. Jenæ, 1686. p. 15. cap. iii. Th. Willis, *Opera Omnia cura* Gerard Blasii, Amſtelod, 1632. 4. *de Anima Brutorum*, cap. xi. p. 167. cap. xii. p. 179. cap. xiii. p. 187. Herman Boerhaave, *loc. cit.* part i. p. 53.

V.

OF THE PIA MATER.

IF there is any part of the human body which, in inſane people, is more ſubject to diſeaſe than the reſt, it is the *pia mater*, and *tunica arachnoides.* Three circumſtances, in particular, were detected, on removing the *dura mater*, which engaged attention. 1ſt. A very thick, greaſy, and adipoſe-like appearance. 2dly. A number of ſmall, white, ſoft, ſemiglobular ſpongy bodies. 3dly. Several

veral ſmall, and, now and then, pretty conſiderable oſſifications*.

* See HERM. BOERHAAVE, l. c. pag. 75. 85, 86.

2. Among one hundred maniacs, there were twenty-ſix, in whom the *pia mater* was thick, ſlimy, and of a watery blue colour; ſo that it had a very great reſemblance to the lymphatic cruſt which is obſerved in the blood of thoſe who labour under pleuritis. In forty-nine perſons, the *pia mater* was not only ſlimy, but alſo preternaturally denſe in every part. In twenty caſes it was found to be leſs denſe, and not equally ſo in all places; and in ſeventeen others, only, was it found of a tolerable degree of thinneſs. Fourteen only were quite free from this diſeaſed appearance*.

* *Diſſert. de gelatinoſorum humorum corporis humani coagulis. Auct.* HERM. BLUHM, Lipſiæ, 1767. 4.

Among

Among twenty-ſix epileptic maniacs, there were ten in whom the *pia mater* was preter-naturally thickened and mucous; in the others it was of a natural conſiſtence.

Among ſixteen epileptic idiots, there were ſix in whom the *pia mater* was thick and ſlimy; but among the others it was in its natural ſtate.

Of twenty purely epileptic patients, the whole of them were found to have a thickened and ſlimy *pia mater*, which, in ſome of the caſes, was of a moſt uncommon thickneſs; in the reſt it was only moderately ſo.

Of four and twenty melancholic patients, there were eighteen in whom the *pia mater* was found thickened and ſlimy; in the remaining ſixteen it was leſs ſo.

Among thirty idiots, there were found to be twenty-two, all of whom had a thickened and ſlimy *pia mater*; but, in the remaining number, this appearance was much leſs obſerv-

ble.

able. Among two hundred and ſixteen ſuch people, therefore, there have been found one hundred and ſixty-two, in whom the *pia mater* was greatly thickened and ſlimy; in ſome more ſo, however, than in others.

3. It is to be remarked, that the white, ſoft, and ſemi-globular ſpungy bodies, which have been already ſpoken of, were more common phenomena, and were alſo frequently met with in the heads of ſeveral of thoſe laſt deſcribed. They have alſo been found in many, whoſe *pia mater* was not thickened or ſlimy, or of a pale blue colour.

4. The late Mr. GUNZ took notice of theſe ſpongy ſubſtances. They are to be moſt commonly met with on both ſides of the head, eſpecially under the forehead and crown. They are often found on the outer ſurface of the hemiſpheres of the brain, immediately under the parietal bones, and near to the temples; and they are alſo frequently to be obſerved between the hemiſpheres of the brain, almoſt as low down as the *corpus calcoſum*. They

They are found of a ſemi-globular ſhape, and commonly of the magnitude of a moderately ſized pea; many, however, are as ſmall as a grain of hemp-ſeed, and ſome ſtill ſmaller than that. Theſe ſpongy bodies are, at times, ſo copious, under the *os frontis* and the *oſſa parietalia*, that they lie thick and contiguous, and often heaped on one another. When this is the caſe it commonly happens that the *dura mater* adheres very ſtrongly to the *pia mater**.

* See HERMAN BOERHAAVE, *loco citat.* part i. p. 89. 136. and 73. JUST G. GUNZ, *de Cerebro*, prol. ii.

5. Among one hundred maniacs, there were ninety-two in whom theſe ſpongy bodies were detected, and of theſe forty-two had a great quantity of them; fifty had only a moderate ſhare of them, and in the others they were ſcanty. In theſe laſt they always appeared at the vertex. Eight patients only, out of the whole number, did not exhibit any ſigns of theſe excreſcences. It is remarkable, that of one hundred maniacs, there were only four

who

who had neither a ſlimy or thickened *pia ma-ter*, or in whom none of the ſpongy bodies were to be found. In eight this membrane was found ſtudded with theſe bodies, but, in-dependently of this, it was not thickened or ſlimy.

Of twenty-ſix epileptic maniacs, fifteen were found in whom theſe ſpongy bodies were obſerved, but few of theſe had them in a mo-derate quantity.

Of ſixteen epileptic idiots, there were eight who had an immenſe number of them, and ſixteen in whom they were in ſmall quantity.

Among twenty epileptic patients, there was not one in whom theſe ſubſtances were not found; in twelve of theſe they were very abundant, and in the remaining eight only in moderate quantity.

In thirty idiots, there were ſeventeen in whom the *pia mater* was much covered with theſe bodies, and eight in whom they were in

ſmaller

ſmaller quantity. And it is remarkable, that in one perſon we did not meet either with theſe bodies, or with a thickened *pia mater;* in another, the membrane was thickened and ſlimy, but there were none of theſe bodies; and in three others the membrane was not thickened, but contained plenty of theſe little tumors.

6. Neither the age of the patient, or the duration of the diſeaſe, appeared to have any influence in producing either a greater or leſſer number of theſe ſubſtances. For experience has ſhewn, that in comparing inſane people of every age, and alſo thoſe who had been long affected by it, and thoſe who have been only a ſhort while under its influence, ſome had many, and others very few; ſo that, hitherto, it has been impoſſible to lay down any rule whereby to judge of this*.

* J. Baptisti Morgagni *de Sedibus et Cauſis Morborum,* Neapoli, 1764, 4 tom. epiſt. viii. p. 102. where theſe ſmall whitiſh bodies are alſo taken notice of. They were found in the neighbourhood of the longitudinal ſinus, on the

the external ſurface of the *pia mater*: ſome were round, others oblong, and others of a very irregular ſhape. According to VALSALVA, they ariſe from the lymph; for he has ſeen them in the bodies of ſome who had wounds in the head. But theſe are not preternatural, as is evident by the correſpondent hollows of the ſkull in which they lurk. Nor are theſe unknown to older writers, for we even find ſome mention made of them by VESALIUS.

7. It is quite otherwiſe with the oſſifications which are frequently detected on the ſurface, as well as in the inſide of theſe ſpongy bodies; and which ſeem to ariſe, and to increaſe in number in conſequence of the long duration of the diſeaſe, eſpecially when the bones, and particularly the ribs, begin to grow ſoft. In ſome a little roughneſs is all that is to be detected; in others, ſlight indurations; and in others, complete and extenſive oſſifications, together with a conſiderable degree of roughneſs*.

* HALLER *de Oſſium Formatione in locis inſolitis Corporis humani*; in *Koneg. Svenſka. Ventenſkaps*

ſkaps Academiens Handlinger foer Aor. 1750. vol. xi. Stockholm 8. p. 12. *et ſur la Formation du Cœur dans le Poulet; ſur l'œil; ſur la Structure du jaune &c. prémiere et ſecond Memoire.* Lauſane, 1758, 12. p. 42. et ſeq. GERARD VAN SWIETEN, l. c. tom. i. § 75. p. 110. HERM. BOERHAAVE, l. c. tom. i. p. 53. 55. TH. WILLIS, l. c.

8. Theſe oſſifications are generally met with in the ſame places as the ſpongy bodies themſelves, namely, on the anterior ſurface of the anterior lobe of the cerebrum, and on the upper ſurface of each hemiſphere, and alſo on the flat ſurfaces which lie contiguous to the falx. In no one inſtance we have met with oſſifications in which the ſpongy excreſcences were not alſo to be met with; and the more numerous theſe ſpongy bodies were, and the longer the duration of the diſeaſe, the more numerous and extenſive were the oſſifications. They generally have a ſmooth poliſhed ſurface; they are convex, and are either of a round or an oval ſhape, and not very thick. The *dura mater* commonly adheres to their

ſuperior

ſuperior ſurface, but with the *pia mater* and cineritious ſubſtance of the brain, they often form one ſolid maſs. The inferior ſurface is often equal, ſmooth, and a little rounded; but for the moſt part it is rough and prickly; and many of the ſharp points which iſſue from it ſink at leaſt the depth of two or three lines into the ſubſtance of the brain. The oſſifications are not very firm, and they are for the moſt part friable.

9. In the heads of two hundred and ſixteen, no more than twenty-four caſes of oſſification of this deſcription have been detected. The moſt of theſe were maniacs, for in one hundred of theſe there were twenty-three ſuch caſes; in twenty-ſix epileptic maniacs, none; in ſixteen epileptic idiots, nine, (among whom one was a ſomnambuliſt;) in twenty epileptic patients, none; in twenty-four melancholic patients, none; and in thirty idiots, eleven; in whom ſuch oſſifications were found in greater or leſſer quantity.

10. Although much has been ſaid about the atrabilious blood being found in the turgid veſſels of the brain, and about its being the cauſe of mania and melancholy, yet it is certain, that of two hundred and ſixteen diſſections, not more than twenty-ſix were found in whom the blood-veſſels were highly diſtended with blood. In one hundred maniacs there were not more than ſeventeen; in twenty-ſix epileptic maniacs, four; in ſixteen epileptic idiots, and alſo in twenty epileptic patients, and twenty melancholic ones, not one; and in thirty idiots only five, in whom the veſſels of the brain were full of blood. Among theſe there were ſome in whom the veſſels were uncommonly diſtended, and contained many air bubbles*.

* *Hiſtoria Medica trium Morborum qui anno* 1760, *frequentiſſime in Noſocomio mihi occurrebant, &c. Auct.* JO. GER. HASENORHL, Vindob, 1761, 8. p. 93. HERM. BOERHAAVE, l. c. tom. 1. p. 128. JOH. BAPT. MORGAGNI, l. c. epiſt. 8. No. 9. p. 108. mentions the caſe of a woman under the *pia mater* of whom he found

found a great quantity of ſerum mixed with air bubbles; a circumſtance he has alſo often detected in others. HASENOHRL alſo mentions the caſe of a maniac, the veſſels of whoſe brain were full of blood, and on whoſe *pia mater* he diſcovered a great number of little air bladders, which were moſt numerous on the right ſide of the head.

11. In one maniac, who had voluntarily beat his head ſeveral times with violence againſt the frame of the bed, the *pia mater* which covered the right hemiſphere of the brain was covered with coagulated blood, and was of a dark colour, from the poſterior part of the head almoſt to the *os frontis**.

* HERM. BOERHAAVE, l. c. part i. p. 31, 32.

12. The ſame kind of ſerous fluid which is ſo often found between the *dura* and *pia mater*, is alſo met with pretty often between the laſt mentioned membrane and the cineritious part of the brain. In general, in one hundred maniacs, there were found twenty-eight in whom

whom there was this collection of watery fluid. In some the water appeared of a red colour, as if tinged with blood; in others it was as yellow as if it had been in infusion of saffron. In one person, several hydatids of the magnitude of a hazel nut were found; and in another, a great number of accumulations of fluid *.

* HERMAN BOERHAAVE, l. c. part 1. p. 87, 88.

In one person, who died apoplectic, a quantity of coagulated blood was observed lying under the *pia mater*, which seemed to have issued from some of its vessels.

In twenty-six epileptic maniacs, there were five who had a great quantity of watery fluid under the *pia mater*.

In sixteen epileptic idiots, there were three in whom a similar appearance was observed.

In

In twenty epileptic patients there were not any, but in twenty-four melancholic ones there were twelve, in whom not only a thin and clear, but alſo a yellow and gelatinous fluid was found under the *pia mater*.

In thirty idiots, there were nine only in whom a ſerous fluid was found under the *pia mater*. One may conclude, that of eight ſuch patients, there are certainly two who have a preternatural quantity of fluid between the *pia mater* and the brain.

VI.

OF THE BRAIN IN GENERAL.

1ſt. THAT the cortical ſubſtance of the brain is often irritated by a clear and limpid fluid, with a yellow, gelatinous, and bloody one, and alſo by ſtrong concretions and oſſifications, appears ſufficiently from the foregoing ſection. In the preſent one, various other caſes which regard the brain will be found; and eſpecially, 1ſt. That in eight maniacs and five

five idiots there was an appearance of inflammation. 2dly, That in three maniacs, a portion of the left hemifphere of the brain, immediately below the coronal future, and at the border of the plane or internal furface of the hemifphere, was depreffed at leaft half an inch lower than the other hemifphere, by an hydatid which lay under the *pia mater*; alfo, that in one melancholic perfon, the right hemifphere in its anterior lobe, and towards the lower part, was fo much depreffed by an extraordinary collection of a yellow gelatinous fluid, that it could eafily have contained in its cavity half a moderately fized apple; and 3dly, in one maniac, who died apoplectic, the whole of the left hemifphere, and alfo the pofterior lobe of the right one, and the *cerebellum* and the *medulla oblongata* were covered with blood, and were torn and diftorted in various ways.

2. There is one obfervation which is deferving of very particular attention; in feventy-fix diffections, there were nine cafes in which a moft unfupportable fmell was emitted on opening the head; in three of thefe the ftench

ſtench was intolerable, and yet the diſſection took place twelve hours only after the death of the patients; one of them was that of a perſon about fifty years old, who had died of apoplexy, and had the appearance of having been of a healthy and plethoric habit*,

* GER. VAN SWIETEN, l. c. part i. § 86. p. 123, 124. § 89. p. 130, 131. And alſo HERM. BOERHAAVE, part i. p. 35.

3. In particular, however, among thirty-nine maniacs, there were four in whom the brain had a fœtid diſagreeable ſmell. In five epileptic maniacs, there was one who had died of *Phthiſis pulmonalis*, whoſe brain was equally fœtid. In five epileptic patients there were two whoſe brain emitted a moſt offenſive odour; and yet in one of theſe the death was ſudden, and all the other viſcera were uncorrupted, and the body itſelf fat and fleſhy. Among four melancholic patients there was only one, and among nine idiots only one alſo, whoſe brain was of this kind. Upon the whole

whole it may be concluded, that the proportion of thoſe whoſe brain is in this ſtate, is as one to ſeven.

4. Although BONNETUS has aſſerted, in his *Sepulchret. Anatomic.* that the brain of maniacs is found to be ſo dry and friable, that it may almoſt be rubbed down into a powder; and although the celebrated RICHARD MEAD has copied this obſervation without having inſtituted any diſſections whereby he might have aſcertained the fact, yet experience has ſhewn the very reverſe to be true: for, except the above-mentioned oſſifications and petrifactions, which have been found on the *pia mater*, and which when dry become neceſſarily friable, are taken for the brain itſelf; there is no good reaſon why an aſſertion of this kind, which ſtands in oppoſition to all experience, ſhould have been believed. With much greater reaſon has the celebrated KLOECKHOF conſidered (although only on hypothetical grounds, and *a priori*) that theſe diſeaſes were inflammations of the brain; for repeated experience has confirmed this opinion*.

* J. Bap. Morgagni, l. c. epiſt. 8. No. 18. p. 115. found the brain in ſuch patients very hard, yet he does not conſider this circumſtance as the cauſe of the diſeaſe; on the contrary, he ſays that the brain may become hard from other cauſes than inſanity; and that inſanity may exiſt in many caſes where the brain is not hard: for it has not only been obſerved by Tulpius, Kerckring, Ring, and Scheid, in the diſſections which they have made, that the brain is ſoft and pulpy in ſuch people; but the laſt mentioned author aſſerts, that this is particularly the caſe with thoſe who are deprived of their ſenſes, as alſo in maniacs.

5. Were it true that this dryneſs and friability of the brain was common, it is probable that it would have been found at leaſt in one caſe in one hundred maniacs, twenty-ſix epileptic maniacs, ſixteen epileptic idiots, twenty epileptic patients, twenty-four melancholic ones, and thirty idiots, eſpecially as many of theſe had laboured twenty, thirty, and even forty years; during which time the gall muſt have had plenty of opportunity to have pro-

duced

duced the moſt extreme degree of hardneſs. The watery fluid, however, which has been found in ſuch abundance under the *pia mater*, proves the contrary very ſufficiently; and we actually find, among ſome who have died of ſuch complaints, that the cineritious ſubſtance of the brain has been ſo ſoft and pulpy, as to allow the ſmalleſt and almoſt imperceptible veſſels to be dragged out of it by withdrawing the *pia mater*. In moſt caſes, however, the cineritious and medullary ſubſtance of the brain are of a good conſiſtence. In the lateral ventricles the cineritious part is generally ſofter than uſual; and if the fourth ventricle, which is in the cerebellum, be examined, it will be found that it is often ſo very ſoft, watery and pulpy, that it is impoſſible to perceive the cavity with accuracy. Now, ſince in diſſections, thoſe only have been remarked in whom the brain has been of a ſoft and watery conſiſtence, it may be ſafely concluded, that in ſuch patients the brain has not been found preternaturally dry.

6. Upon the whole experience has ſhewn, that of two hundred and ſixteen ſuch patients, there have been one hundred and eighteen in whom the brain was ſofter than uſual. And as there are many unnoticed intermediate degrees of ſoftneſs between the natural conſiſtency of the brain and that degree of ſoftneſs which has been remarkéd, it may be ſafely concluded, that in all thoſe who have died of theſe diſorders, the conſiſtence of the brain is ſofter than uſual.

7. Among one hundred maniacs there were fifty-one whoſe brains were ſoft, watery, and pulpy; and of theſe fifty-one, there were fifteen in whom theſe appearances were in a remarkable degree, and twenty-ſix in whom, although they were better in theſe reſpects, yet they were much too ſoft.

Among twenty-ſix epileptic maniacs there were eighteen, in ſome of whom the brain was obſerved to be preternaturally ſoft, and in others it was quite uncommonly ſoft, watery, and pulpy.

Among

Among ſixteen epileptic idiots, there was one whoſe brain was a great deal too ſoft, and five others in whom it appeared to be ſo in a very uncommon degree.

In twenty epileptic patients there were eight whoſe brain exhibited this appearance; in one of whom it appeared to be of a very extraordinary degree of ſoftneſs; and although leſs ſo in the others, yet it was ſtill a great deal too ſoft.

In twenty-four melancholic patients there were nineteen in whom the ſubſtance of the brain appeared to be a great deal too ſoft and pulpy, and in two of them it was remarkably ſo.

Among thirty idiots, there were ſixteen in whom the ſame ſtate of brain was detected; of theſe there were nine in whom it was very remarkable, and in the other ſeven conſiderably ſo.

VII.

VII.

OF THE LATERAL VENTRICLES.

1. IN the ventricles of the brain the following circumſtances are particularly to be alluded to: 1ſt. their relative ſize and ſituation; 2dly, the quantity of water which they contain; and 3dly, the ſtate of the *plexus choroidæus;* for, in inſane people, a number of ſingularities are often to be found in theſe places.

2. We find, in regard to the ventricles, not only that their magnitude is different in ſuch patients, but alſo that they are often diſproportionate to each other in the ſame ſubject.

3. Of one hundred maniacs, there were twenty-one in whom the lateral ventricles were found preternaturally wider and larger than uſual; and in eight they were quite indeſcribably ſo.

Of

Of twenty-four melancholic patients, there were eight in whom they were found much larger than ufual, and four in whom they were uncommonly large.

Of thirty idiots, there were feven in whom thefe ventricles were very large and long.

4. But this preternatural fize does not appear to be the principal alteration which thefe cavities are liable to; efpecially as a much greater number of infane are found in whom the lateral ventricles are either fmaller, fhorter, or narrower than ufual.

5. For in one hundred maniacs, there were thirty-four in whom the lateral ventricles were very fmall, narrow and fhort, and four in whom they were remarkably fo.

Among twenty-fix epileptic maniacs there were nine in whom they were very fmall, fhort and contracted, and which did not contain a drop of fluid.

Among twenty epileptic patients, there were four in whom the lateral ventricles were found to be very ſmall.

Among twenty-four melancholic patients there were twelve, and of thirty idiots there were ten, in whom a ſimilar appearance was detected.

6. Independently of all this, a great diſproportion is often obſerved between the ſize of the lateral ventricles of the ſame ſubject; for it has been found that, in ten maniacs and three idiots, the left ventricle has been much larger than the right; and, on the other hand, in ſeven maniacs and four epileptic maniacs, the right ventricle appeared to be much larger than the left. In ſome maniacs the left ventricle was much higher than the right; and, on the other hand, in ſix other maniacs the left was at leaſt a quarter of an inch lower than the right.

7. In regard to the greater or ſmaller quantity of fluid which has been found in theſe

cavities, experience has demonſtrated the following facts. In ſix maniacs they were found uncommonly full, and in twenty-three they were ready to burſt: in one of theſe, who had died of apoplexy, the left ventricle was quite full of coagulated blood. In eight maniacs they were moderately full, and in eleven people, who had alſo been affected with mania, they were found to be quite empty. Of ten other maniacs, there were five in whom the right ventricle was found to be quite full, and the left only moderately ſo; and, on the other hand, there were four in whom the left ventricle was found quite full, and the right one almoſt empty. In five others, the right ventricle was empty, and the left one only moderately full.

Of twenty-ſix epileptic maniacs, there were thirteen in whom both ventricles were quite diſtended with fluid, and five others in whom theſe cavities were very full.

Of ſixteen epileptic idiots, there were three in whom both cavities were quite empty; in four,

four, the right ventricle was empty, and the left moderately full of a ſerous fluid. On the other hand, the right ventricle was found, in one caſe, to be uncommonly diſtended, and the left ventricle only moderately full. In another, the right ventricle was moderately full, and the left quite empty.

Among twenty epileptic patients there were nine in whom both ventricles were found uncommonly diſtended with water. In two others they were only moderately ſo, and in one caſe they were quite empty. In four others the right ventricle was found quite empty, and the left full of a clear watery fluid.

Of twenty-four melancholic patients, there were ten in whom both ventricles were found aſtoniſhingly diſtended with water, and alſo two others in whom they were uncommonly full and of a very large capacity. In two others they were quite full, and in five they were obſerved to be empty. In the reſt the right ventricle was found quite full, and the left only moderately ſo.

Of thirty idiots, there were fourteen in whom both ventricles were amazingly diſtended with fluid: in this number, however, one was included who died of apoplexy, in whom both ventricles were found full of blood. In four others the ventricles were moderately diſtended; in three others they were quite empty, in four more the right one was greatly diſtended, and the left one only moderately full; and in four others the left was moderately full, and the right one almoſt empty.

8. It was not eaſy to determine the true quantity of the water which was contained in any one cavity. But it may be ſafely aſſerted, that, in eight patients of this deſcription, each ventricle contained a tea-cup full, or from three to four ounces.

It is remarkable, that when little or no water is contained in theſe cavities, there is no mark of any opening from the lateral ventricles into the third ventricle, but the inferior ſurface of the anterior edge of the *commiſſura anterior* lies immediately in both cavities, on the medullary ſubſtance

ſubſtance which is underneath, immediately adjoining to the *corpora ſtriata*, and appears to be covered with a fine membrane which lines the ventricles. But when theſe cavities are filled with water, and diſtended in every way, it is raiſed up ſo much that the membrane at laſt gives way. Hence we find, in the heads of thoſe in whom the cavities are only ſlightly diſtended, that, according to the bulk of theſe cavities, there is an opening of two, three, four, five, or ſix lines in length; which has the ſame kind of appearance as if the eyelids were only opened a little way. When the lateral ventricles are more diſtended this opening appears of an oval ſhape; and if they are fully diſtended it appears quite circular. This opening has always been found when water was preſent. The ſmalleſt circular opening is able to admit a moderate ſized pea, but ſome are conſiderably larger. Through this opening the water of the lateral ventricles could flow freely into the third one.

9. Among two hundred and ſixteen caſes, there were not more than ſixteen in whom the

plexus

plexus choroideus was in a perfect or nearly natural ſtate. Three of theſe were maniacs, three others were epileptic maniacs, three others epileptic idiots, and the ſix remaining ones idiots. In the other two hundred this body was very much diſcoloured, thick, ſwollen, hard, and full of hydatids*.

* See HERM. BOERHAAVE, l. c. p. 112. 116.

In ninety-ſix maniacs the *plexus choroideus* was ſpoilt throughout; it was thick, ſwollen, and full of hydatids, which were of different ſizes, from that of a large ſugar pea down to the ſmalleſt grain pearls; and, in general, it was as thick as a bean at its edges. In eleven of theſe unhappy people the *plexus* was very thick and ſwollen; but there were no hydatids in it. In fifteen others a number of oſſifications and petrifactions were detected, independently of hydatids, which were alſo obſerved. In four of theſe, indeed, no hydatids appeared, but in their place a ſingular kind of aqueduct was to be ſeen. In five maniacs the

plexus

plexus was found quite hard and ſcirrhous; and in ſixteen others it was thick and ſwollen, and ſtudded with innumerable hydatids; in eight others the ſame bodies were obſerved, but not in ſuch ſize. In the remaining thirty-ſeven maniacs the *plexus* was only moderately ſwollen*.

* See HERMAN BOERHAAVE, l. c. part i. pag. 155. GER. VAN. SWIETEN, l. c. tom. i. p. 165. et ſeq. Oeuvres Anatomiques de M. DUVERNAY, Paris, 1761, tom. i. p. 41. who does not think that there are any glands in the *plexus*, but who thinks that the veſſels which are diſtributed through the cellular membrane, and which he compares with ſmall-pox, are ſwelled into the nature and ſhape of hydatids. *Duæ Relationes de Morbis ſingularibus, a* CL. JOHNSTONE, CL. FOTHERGILL *communicatæ, in Medical Obſervations and Inquiries*, Vol. ii. 1762. 8. p. 115. where it is mentioned, that in one diſſection half an ounce of water was found in the ventricle of the brain, and alſo a moderately large hydatid adhering to the *plexus*.

Among

Among twenty-three epileptic maniacs there were ſeventeen who had innumerable hydatids in both ventricles; in the others the *plexus* was very thick, ſwollen, and cartilaginous.

In ſixteen epileptic idiots there were ſix in whom there were only a few hydatids; in two there were many; and in the remaining number there was a conſiderable number of theſe bodies.

Among twenty epileptic patients the *plexus choroideus* was ſomewhat ſwollen, and of a dark red colour; in five it was thick, ſwollen, and hard; in four it was moderately ſwollen; and in the remaining number very much ſwollen, and ſtudded with hydatids.

Among twenty-four melancholic patients there were fourteen in whom the *plexus* was ſwollen and full of hydatids; in the remaining number, however, theſe bodies were in much greater number.

Among

Among twenty-four idiots there were ten, all of whom had thick and ſwollen *plexus;* in the remaining number it was not only thick and ſwollen, but alſo contained a number of hydatids.

In ſome this body could only be examined in one ſide, becauſe it was covered with coagulated blood in the other. In ſome it was apparent only in the right ſide, in others in the left.

VIII.

OF THE THIRD VENTRICLE.

1. THE third ventricle is, in ſuch people, of the ſame nature as the lateral ventricles. In ſome it is large, in others ſmall; ſometimes quite full of water, at other times only moderately diſtended; and in many caſes it is quite empty. Of all which we ſhall ſpeak more fully.

2. In regard to the ſize, we have found it of a moſt extraordinary large capacity in twenty-four maniacs out of an hundred. On the other hand, in ſixteen of this number it was quite ſmall, narrow, and ſhort; and in four others uncommonly narrow and ſhort.

In twenty-ſix epileptic maniacs this ventricle had its natural appearance, but in eight others it was uncommonly ſhort.

In ſixteen epileptic idiots it did not appear to be larger than common, in any remarkable degree; in three it was too narrow; and in four it was ſhaped like an irregular triangle; ſo that it became very acute in its exterior part, near to the *infundibulum*; and in reſpect to the oppoſite ſide, it was too wide.

In twenty epileptic patients there were four in whom this cavity was too large. In none of them was it diſcovered to be too ſmall.

In twenty-four melancholic patients this ventricle was too large. In all the others it was of a natural ſize.

In thirty idiots there were five in whom it was tolerably wide, four in whom it was very capacious, and ſix in whom it was too narrow.

3. As to the fluid contained in this cavity, it has been found that, among one hundred maniacs, there were fifty-ſeven in whom the third ventricle was quite full; twenty in whom it was moderately ſo, fifteen in whom it contained very little, and in the remainder it was quite empty.

In twenty-ſix epileptic maniacs this cavity was found quite diſtended with fluid.

In ſixteen epileptic idiots there were four in whom it was full of water; in three it was moderately full, and in the reſt it was almoſt empty.

In

In twenty epileptic patients there were fix in whom this cavity was full of water; in three others it was moderately full; and in the others there was either a very fmall quantity of fluid, or elfe it was quite empty.

In twenty-four melancholic patients, there were fixteen in whom this cavity was quite full of water, and eight in whom it was empty.

In thirty idiots there were fourteen in whom this ventricle was found quite full of water; in ten it was moderately full; and in fix it either contained very little fluid, or elfe was quite empty.

It may be remarked here, that in four people who had died apoplectic, the fluid which was contained in this cavity appeared quite red. In two, the *plexus* of veffels which covers the pineal gland was quite black with extravafated blood; and in two others it was of a deep red colour.

IX.

IX.

OF THE PINEAL GLAND.

IN a number of cafes the pineal gland is found quite covered with water.

In one hundred cafes of mania there were thirty-four in whom this appearance was obferved.

In twenty-fix epileptic maniacs there were eight in whom it was found covered with water.

In fixteen epileptic idiots there were feven in whom it could not be feen for the ferum which furrounded it.

In twenty epileptic patients there were ten in whom the gland was equally concealed.

In twenty-four melancholic patients there were twelve in whom it could hardly be difcerned

cerned for the watery fluid which covered it.

In thirty idiots there were nine in whom the gland was alſo covered with a watery fluid.

2. In regard to the magnitude of this gland, it has been found, that in the bodies of one hundred perſons, who died maniacal, there were forty-ſix in whom it was of its natural dimenſions; in thirty-ſeven it was much larger than uſual, and in ſeventeen it was much ſmaller.

What is very remarkable, however, is, that in four caſes it was found as large as a cherry, and in two as big as a hazel nut; and at the ſame time it was covered with ſmall hydatids. On the other hand, in three caſes it was diſcerned to be uncommonly ſmall.

In twenty-ſix epileptic maniacs this gland was of its natural ſize, if we except eight in whom it was very long and ſlender.

In

In ſixteen epileptic idiots there were eight in whom it was found to be of its natural ſize; in two it was larger, and in four ſmaller than uſual.

In twenty epileptic patients the magnitude of the pineal gland was quite natural.

In twenty-four melancholic patients there were only four in whom it was of its natural ſhape and ſize: in all the others it was larger than it ought to have been.

In thirty idiots there were twelve in whom the gland was quite natural; in twelve others it was larger than common, and in the others ſmaller than common.

3. As to the conſiſtence of the pineal gland, there were twelve people, in a hundred caſes of mania, in whom it was harder and more tenacious than natural. In fourteen others it was found to be quite ſoft and watery. It is, moreover, to be remarked, that in four patients it had the ſhape of a compreſſed cylin-

der,

der, and was ſurrounded with three ridges, and appeared as if it had three grooves.

In two caſes this gland had the form of a heart; in three caſes it was long and thin; and in one caſe quite ſharp-pointed.

In ſixteen idiots there were four in whom it was too ſoft, and three in whom it was too hard; in one of whom it diſſolved like water when rubbed.

In twenty epileptic patients there were five in whom the gland was too ſoft.

In twenty-four melancholic patients there were four in whom it was too hard, and four others in whom it was too ſoft.

In thirty idiots there were ſix in whom this ſmall body was ſomewhat too hard, and in ten others it was too ſoft, approaching almoſt to a degree of fluidity.

In

4. In regard to the ſand and ſtony concretions which are ſo frequently found in this gland, and concerning which the late Dr. GUNZ has propoſed the following queſtion; namely, Whether they were not to be found in every caſe of mania, and were not the cauſe of the diſeaſe? experience has ſhewn us the following facts*.

* See *Anatomiſche Beobachtungen über die Steine, welche in verſchiedenen theilen des menſchlechen Koipers gefunden werden von* MECKEL (*Hiſtoire de l'Academie Royale des Sciences, &c.* Berlin, 4to. pag. 92.) In which the author ſays, that there is hardly any part of the human body in which ſuch ſubſtances have not been found. The ſubſtance of the brain itſelf, which may be conſidered as the ſofteſt and moſt delicate part of the whole human frame, is not exempt from this. He does not, however, adopt the opinion of Mr. GUNZ; becauſe, upon examining the heads of four patients who had died melancholic, he had found three in whom the gland was quite freſh and ſound. And although, in the fourth, he diſcovered a ſtone of a tolerably large ſize, which in

in its texture refembled a blood-ftone, and which was fituated in the pofterior lobe of the left hemifphere of the brain, behind the pineal gland, yet he had often feen upon former occafions, fimilar ftony concretions in the pineal gland of people who were in good health.

5. In one hundred maniacs there were fifty-two, and confequently more than the half, in whom either one ftony concretion, or elfe feveral, were detected. Thefe were larger and fmaller, and round and angular, in different cafes. In fome a confiderable quantity of fand, alfo, has been difcovered.

In twenty-fix epileptic maniacs, there were three who had one very large ftony concretion in this gland; five who had one of a moderate dimenfion and pointed form; and four in whom two fuch ftones were detected.

In fixteen epileptic idiots, there were three in whom a fingle fmall ftony concretion was found.

In twenty purely epileptic patients, there were four in whom one little ſtone was detected in the pineal gland; in three others, however, there were from twenty to thirty.

In twenty-four melancholic patients, there were ſix people in whom very few concretions of this nature were to be found; but ſeven others in whom the particles of ſand were numerous.

In thirty idiots, there were nineteen in whom ſeveral ſtony concretions were found in the pineal gland; ſome of whom had nearly thirty particles of ſand each.

6. Although in all the bodies which were examined after death, the diſſection was not conducted with that degree of care which is beſtowed in other caſes, yet it was ſufficiently ſo to diſcover many other ſingularities in different parts of the body. For inſtance, we found in one epileptic patient the *nates* very large, and in one maniac, the *teſtes* very ſmall. In an epileptic maniac the *nates* were very much

compreſſed and flat, and the *teſtes*, eſpecially the right one, in a natural ſtate. In a maniac, who had died apoplectic, theſe bodies were covered with blood; and in the caſe of an epileptic maniac, in whom they were very ſoft, they lay ſo deep that they were quite covered by the *cerebellum*, and were not diſcovered until we reached the fourth ventricle. In one epileptic maniac the *corpora quadrigemina* were very flat, ſoft, and almoſt imperceptible; and in one idiot they were remarkably flat, ſoft, and ſmall: but in one maniac they were ſo flat and ſoft, that the left *teſtes* could hardly be known. In one epileptic idiot, (who was a ſomnambuliſt, and conſtantly looked upwards) the *teſtes* were the ſmalleſt of any we had yet ſeen; and in their interſtices the great lobe of the brain was ſo diſtant from the fourth ventricle, that it did not cover it, but left it quite expoſed.

7. In one maniac the *infundibulum* was cloſed at its entrance into the fourth ventricle with a ſtrong membrane. In three epileptic maniacs the *commiſſura cerebri anterior* was quite

quite wanting, except a coalefcence of the *thalami nervorum opticorum*, which was about a line's breadth and a little below the place where the *commiffura* ought to have been, was mifta-ken for it. In one maniac, and in one epilep-tic patient, the *commiffura* was nearly half an inch in thicknefs.

8. The *thalami nervorum opticorum* were, in one cafe of mania, found to have adhered. In two epileptic maniacs, two fmall *thalami* were found to be feparate at their fuperior part; but towards the middle they adhered to a cineri-tious fubftance, which lay fo near to the *cor-pora ftriata* that they all feemed to be blended together. In two idiots they were very fmall, and ftood wide from one another. In one idiot, at the pointed part of the *thalamus* of both fides, there was a medullary prominence half as big as a pea, which projected beyond the furface of the *thalamus*. In one maniac the *thalami nervorum opticorum* ftood more con-tiguous to the *corpora ftriata* than had ever be-fore been obferved*.

* DUVERNEY, l. c. part 1. p. 41. mentions his having frequently ſeen, in dead bodies, oval and roundiſh eminences on the *thalami* of the optic nerves.

9. Before we leave this part of the brain there is a remarkable circumſtance which deſerves notice. A man who had laboured under an acute diſorder, when he was about thirty-three years of age, ſoon afterwards became inſane, and ſoon died. On opening his head there was found, in the medullary part of the right ſide of the brain, near where the medulla of the two hemiſpheres join to form the *centrum ovale*, a browniſh, red-coloured ſpot of the ſize of a ſixpenny piece, which had the appearance of a ſplit fig or ſpoilt pear. This ſpot was much ſofter than any other part of the brain, and was ſo deep that it reached to the baſis of the brain. The ſhape which it had, at that part, was that of a ſmall oval, the longeſt diameter of which was two inches in length, and the ſhort one was one inch. It was elevated in the form of a round ball, about two inches high. The nearer it reached

reached the basis of the brain the broader and larger, and the redder it was. It did not contain any matter, nor did it emit any disagreeable smell. Was this appearance from birth; or a metastasis from previous disease?

X.

OF THE CEREBELLUM IN GENERAL.

EVERY thing which has been said of the brain in general may also be said of the *cerebellum*, except that spongy excrescences, ossifications, and petrifactions, have never been once met with. The *cerebellum*, as has been already observed, is commonly much softer, pulpy, and more watery than the brain*. But the membranes which envelope it, especially the *pia mater* and the *tunica arachnoidea*, are seldom found so much thickened, mucous, and discoloured as in those which cover the brain. In the heads of these maniacs, however, these membranes were discovered to be thick and mucous, and studded with hydatids of the size of a pea, not only on the *cerebellum*, but

but alſo on the *medulla ſpinalis.* In two people, who had died apoplectic, the *cerebellum*, the *medulla oblongata*, and the *medulla dorſalis*, were found coated with coagulated blood. In two others, who to all appearance had died apoplectic, during an attack of epilepſy, the *pia mater* was diſcoloured with blood, for the extent of an inch in length and two or three lines broad, at that place which covers that portion of the right wing of the *cerebellum* where that body joins the *medulla oblongata*.

* Gerard. van Swieten, l. c. part 1. § 112. p. 164. and § 170. No. 1. p. 250. § 267. p. 434. ſays the *cerebellum* is always much more ſolid than the *cerebrum;* and this is the very contrary of what uſually happens.

2. In all thoſe caſes in which the brain has a fœtid offenſive ſmell, the *cerebellum* is found to partake of the ſame diſorder. This was found to be univerſally the caſe with all thoſe who have been already mentioned.

3. All

3. All maniacs, whoſe brain was found to be preternaturally ſoft, have had, as experience has ſhewn, a ſtill ſofter *cerebellum*.

Independently of the two epileptic maniacs already mentioned, there were twelve others who had an uncommonly ſoft, watery, and very ſmall *cerebellum*.

In fourteen epileptic idiots there were five in whom the *cerebellum* was found to be too ſoft.

In twenty epileptic patients there was not one in whom the *cerebellum* was not found to be much ſofter and ſmaller than uſual.

In every caſe of melancholy and idiotiſm which, as has been already taken notice of, there was any preternatural ſoftneſs of brain, there was alſo a preternaturally ſoft *cerebellum*.

XI.

XI.

OF THE FOURTH VENTRICLE.

AS the fourth ventricle is naturally very ſmall, ſo in no inſtance have we found it preternaturally ſo. In ſix maniacs and one epileptic patient it was natural, and in all the reſt it was too wide. In ſome caſes, even where no water was preſent, it has been found to be ſo wide as to admit the little finger eaſily. In other caſes, in which it was filled with water, the thumb would not have filled it completely; and although the quantity of water which this cavity naturally contains is not to be accurately aſcertained, ſtill it is certain that, in ſome caſes, it meaſured half an ounce, and in others a whole one.

In an hundred maniacs, there were eighty in whom the fourth ventricle was ſo much diſtended with water, as to be ready to burſt; ſome in whom it was immoderately diſtended; and, on the other hand, only three in whom it

was

was quite empty. In the reſt this ventricle contained only a little water; and in one, who died apoplectic, it was found full of blood.

In twenty-ſix epileptic maniacs, this cavity was found immoderately diſtended; in four it was moderately ſo; and in five others it was wide, but did not contain any fluid.

In ſixteen epileptic idiots, there were ſix caſes in which it was found immoderately full; in the others it contained only a little water.

In twenty epileptic patients, there were eleven in whom it appeared completely diſtended, and nine in whom there was little or no water.

In twenty-four maniacs there was not one in whom it was not found completely diſtended with water.

In thirty idiots, there were twenty-four in whom it was quite full; and in one of theſe, who had died apoplectic, it was filled with a

bloody

bloody ſerum; but in the reſt there was no fluid.

Before taking our leave of the *cerebellum* and fourth ventricle, there is a very particular caſe which deſerves to be mentioned. The third ventricle was quite preternaturally conſtructed, as has been already obſerved; toward the *infundibulum* it was very narrow; and at the oppoſite extremity, near to the *corpora quadrigemina*, it was at leaſt once as wide as it ought to have been, and ſo dilated that it reſembled a common triangle. The *corpora quadrigemina* lay very profound; the *teſtes* were very ſmall; in the middle interſtice of theſe bodies, the extremity of the great lobe of the brain was ſo diſtant from the fourth ventricle, that it was quite expoſed. From between each *teſtis*, or rather from the medullary ſubſtance to which they adhered, a medullary chord was ſent; theſe were each as thick as a common quill. They took a direction towards the great lobe of the brain; where they deſcended, and kept along the brain and around the fourth ventricle. They were ſo twiſted

round

round each other, as they furrounded the ventricle, that it was impoffible to fay where they terminated. In another cafe the great lobe was entirely wanting; and in its place was a thick medullary chord, which formed the pofterior part of the fourth ventricle, by which means it was much wider and higher, and was immediately connected with the third ventricle.

XII.

OF THE GLANDULA PITUITARIA.

1. THE examination of this fubftance, in the firft thirty bodies which were opened, was not very careful; but in the remaining hundred and ninety-feven it was accurately inveftigated.

2. As the natural fize of this gland is about that of an ordinary-fized bean, fo every one which was larger is called bigger, and every one which was lefs is called fmaller than ufual.

3. Ac-

3. Accordingly, of feventy-four maniacs, there were fifty-four in whom the pituitary gland was natural; in twelve it was found to be large, and in eight fmall.

In twenty-two epileptic maniacs there were fifteen in whom this gland was of its ufual bulk; in five others it was larger than ufual.

In twelve epileptic idiots this gland was too fmall; in the others it was quite natural.

In twenty epileptic patients the pituitary gland was in a natural ftate.

In twenty-two melancholic patients, there were eight in whom it was found to be too large; in the others it was of its natural fize.

In twenty-nine idiots, there were five in whom it was large; in the others it was of its ufual magnitude.

4. In

4. In ſeventy-four maniacs there were only twenty-five in whom the gland had its natural conſiſtency; on the other hand, it was found to be too hard in thirty-ſeven inſtances, and in twelve it was too ſoft.

In twenty-two epileptic maniacs, there were nine in whom it was too hard, and eight in whom it was too ſoft.

In twelve epileptic idiots, there were ſix in whom this gland was greatly too hard; and in the remaining fifteen it was natural.

In twenty-two melancholic patients, there were twelve in whom it was too ſoft; in ſix it was of a natural conſiſtence, and in all the reſt it was too hard.

5. It appears then, that in all theſe diſeaſes the *cerebrum* and *cerebellum* had a great tendency to become ſofter than uſual; and the pituitary gland, on the other hand, to become harder.

XIII.

OF THE BASIS OF THE SKULL.

1. AS it is impoſſible, in caſes ſuch as thoſe which have been deſcribed, to attend to every minute deviation of ſtructure which may occur, ſo it is our intention, at preſent, to take notice of thoſe only which are moſt remarkable. The greateſt number are to be met with in the neighbourhood of the *ſella turcica*, eſpecially behind the *proceſſus clinoidei**.

* Herm. Boerhaave, l. c. part 1. p. 7.

2. They are frequently met with much longer than uſual, and are ſo ſharp and pointed as to give reaſon to fear that they might have lacerated the brain; but no ſuch appearance is ever found.

3. This immenſe elongation of the poſterior clinoid proceſſes is not always equal on both

ſides,

ſides, for the right is often ſharper and higher than the left; and ſometimes, alſo, the contrary takes place. In one maniac a preternatural proceſs, of conſiderable length, aroſe from between the two clinoid proceſſes.

4. Among one hundred maniacs, there were thirty-four in whom this ſharp-pointed elongation of the poſterior clinoid proceſſes was obſerved. In ſome it was found equally elongated on both ſides; in others it was only ſo on one; and in ſome others, there were ſharp proceſſes iſſuing from between the two.

In twenty-ſix epileptic maniacs, there were eight in whom this proceſs was ſharp and pointed; and in one of theſe there was a ſmall upright proceſs, as ſharp as a needle, which aroſe from the baſis of the ſkull, juſt where the middle lobe of the right hemiſphere lies.

The ſame phenomenon was obſerved in two ſtrong-made epileptic perſons. In three idiots, the clinoid proceſſes were thin and friable, and in four epileptic patients they were quite

 moveable.

moveable. In two maniacs the *cryſta galli* was quite moveable, but no other preternatural appearance was to be ſeen in it.

In one maniac the *os petroſum* of the temporal bone of the right ſide was much larger and higher than the left.

In ſix maniacs the *ſella turcica* was deep and flat, and the ſpace between it and the *cryſta galli* was quite level; ſo that the inferior ſurface of the anterior lobe of the brain had not the ſmalleſt curvature, as it uſually has.

In four maniacs, a hard glandular ſubſtance, of the ſize of a ſmall pea, was found on the left ſide, about an inch from the *ſella turcica*: and in three others a ſimilar body, of the ſize of a raſpberry, was found ſituated between the *cryſta galli* and *ſella turcica*. All theſe bodies were of a white colour, and adhered to the ſkull; and yet, on removing them, no preternatural appearance was found, either on the bone, or on the *dura mater**.

* HERMAN

* HERMAN BOERHAAVE, l. c. part i. p. 69.

In two maniacs there was found a hard reddiſh-coloured glandular ſubſtance, of the ſize of a Spaniſh nut. It adhered to the left and anterior ſide of the *ſella turcica*, and roſe up above it.

N. B. *In the original Mr.* GREDING *gives a deſcription of the appearances of the viſcera of the thorax. But as there is not one obſervation which ſeems to be of the ſmalleſt importance, it has been deemed unneceſſary to tranſlate it. It were much to be wiſhed, that the viſcera of the abdomen had been examined with the ſame degree of care; eſpecially in caſes of* hypochondriaſis *and* melancholia *of long ſtanding.*

NOTES

REFERRED TO

IN THE WORK.

No. I.

(Vide Vol. I. p. 3.)

"CORDIS pulſatio, nec ſenſu peragitur, nec variatur. Fibræ cordis virtute micationis vitalis ſanguinis in ejus ventriculis contenti, per vices irritatæ, excitantur ad ſe contrahendas et pulſationem faciunt; mox irritatione remiſſâ relaxantur et naturalem poſitionem repetunt." GLYSSON, *De Ventriculo et Inteſtinis.* p. 148. § 3.

In another part he continues thus. "Negari non poteſt evidentem hic fieri fibrarum irritationem. Secundum hunc enim, rythmus pulſationis

ſationis variatur, ut ex pulſuum differentiis in febribus et aliis morbis conſtet. Neque quidem fas eſt hic cauſari fibrarum ſenſationem: Siquidem hæc irritationis per vices perceptio, æque inter dormiendum quo tempore ſenſus feriantur, ac inter vigilandum exercitur. Non ergo perceptione ſenſitivâ in his actionibus aſt naturali irritationem vitalis ſanguinis percipiunt, et ad ſe vigorandas et per vices remittendas animantur. Idem corrobatur in motu tumultuoſo animalium perſiſtante, decollatis earum capitibus. Similiter inteſtina adhuc calentia in abdomine recens aperto ſi varii motitant et intorquant. Fibræ muſculorum in animalibus defunctis, acribus, et pungentibus liquoribus tactæ ſe contrahunt. Quid opus eſt pluribus? Hinc ſatis certò inferre licet fibras abſque ſenſuum axilio poſſe irritationem percipere et conformiter ſe movere."

No.

No. II.

(Vide Vol. I. p. 12.)

The laws of irritability, as eſtabliſhed by FONTANA, in his *Recherche Filoſofiche ſopra la Fiſica Animale, tom.* i. are as follow:

Legge 1. Ad ogni contrazione della fibra è ſempre neceſſario un nuovo ſtimulo che ne riſvigli l'irritabilità.

Legge 2. L'irritabilità non è ſempre coſtante, ma ſola dopo un qualche tempo ritorna al muſculo, ſecondo l'indole e lo ſtato delle ſue fibre.

Legge 3. Il muſculo contratto per lungo tempo perde l'irritabilità.

Legge 4. Il muſculo diſtratto o compreſſi per lungo tempo perde l'irritabilità.

Legge 5. Il muſculo che lungamente ſta relaſciato perde l'irritabilità.

No.

No. III.

(Vide Vol. I. p. 230.)

Id magis difficile videtur explicatu, quomodo animalia abſque encephalo vivant, ſive id ſubito deſtructum fuerit ſive lento malo ſublatum.

Et primum vulgare eſt in animalibus de inſectorum genere, (*a*) et in frigidi ſanguinis quadrupedibus (*b*) capite reſecto vivere ea animalia, currere (*c*) et clamare, (*d*) et cibum quærere, (*e*) et venerem exercere, (*f*) et de hoſtibus vindictam ſumere (*g*) etiam a pluſculis diebus. Vide HALLERI *Elem. Phyſ.* t. iv, p. 352.

(*a*) *Capita reſecto crabones vivunt*, Purchas of the Bees, p. 186. *Veſpæ*, Woodward Suppl. p. 93. 97. *Muſcæ*, id. p. 92. *Erucæ*, Zimmermann, p. 21. *Scarabei*, Phyſique des Animaux, p. 254. *Gryllotalpæ*, Jaccobæus, p. 103. *Locuſtæ*. Trauner, p. 29. (*b*) *Lacerti*, Vandelli Epiſtolæ ii. p. 243. Tachard Voyage de Siam, tom. ii. p. 254. *Ranæ*, Whytt. Phys. Eſſays,

Eſſays, p. 214. Zimmermann, Woodward, Redi, &c. (*c*) *Muſcæ*, Woodward. *Ranæ*, Zimmermann, Borellus. (*d*) *Ranæ*, Zimmermann, Woodward. (*e*) *Vermes*, Bonnet Inſectol. t. ii. p. 94. (*f*) *Muſcæ etiam ova ponunt*, Boyle de Util. Phys. Exp. p. 116. Redi Inſectol. p. 81. 82. (*g*) Veſpæ, l. c. *Veſpæ et Papiliones*, Philoſ. Tranſact.

No. IV.

(Vide Vol. II. p. 10.)

(*Extracted from the American Tranſactions,* Vol. i. p. 198.)

" A child, three years old, was ſeized with inſanity, or rather idiotiſm, ſuddenly, without the ſmalleſt degree of fever, or any other complaint to account for ſo ſtrange an affection. The parents were greatly alarmed, and ſent for me; I arrived when the child had been a few hours in this condition, examined it very cloſely, found its pulſe moderate and natural, no preternatural heat or fluſhing, no thirſt, tongue clean, no internal function whatever diſturbed, but thoſe of the brain; the child was

was to all appearance happy, talking all the incoherent nonfenfe that can be imagined, laughing, and in conftant motion; but laboured under fo great a debility, that it could not ftand or walk without tottering; and feveral times in attempting it fell down; it was a perfect *delirium mite*. I had fortunately feen feveral fuch cafes from eating the feeds of the *Datura Stramonium*, or thorn-apple, in Philadelphia, which made a confiderable impreffion upon me. Perfuaded that the cafe before me was another of the fame kind, I queftioned the parents ftrictly, if the child had not been eating fomething improper; they anfwered confidently in the negative; I ftill expreffed my doubts, and at laft told them pofitively it had been taking fome of the above apple; they were furprifed at my obftinacy, and declared none grew near the houfe. I immediately gave it a large dofe of tartar emetic, recollecting that, in the former cafes, there had been a great infenfibility of the ftomach; this not proving fufficient, and the child taking no medicine, with reluctance I introduced a funnel into the mouth, and forced down a great quantity

quantity of warm water, which had the desired effect. The matter was now determined; I was highly gratified, and the by-ſtanders all aſtoniſhed, at the ſight of a table ſpoonful of ſeeds and the thorny covering. The child, after this, improved rapidly, and in a few days was perfectly recovered."

In like manner various other narcotic remedies, as they are commonly called, produce delirium. SAUVAGES has given a very good catalogue of theſe. The *hyoſcyanus niger*, the *conium maculatium*, and the *Atropa Belladonna*, all produce ſimilar effects when taken in a certain quantity.

See SAUVAGESII *Method. Medend.* tom. ii. p. 141. et ſeq,

In the *Hiſtor. Mirab.* of FRITISH, part ii. Hiſt. 6. there is a ſingular account of the effects of the ſeed of the *Datum Stramonium*. A quantity of it was eaten by a number of the ſervants of a Baron de Salvador, all of whom were affected with a mild delirium. The ſame

ſame author, Hiſt. 8. mentions the caſe of two monks, who became delirious in conſequence of having eaten a quantity of the root of the hemlock. They both of them imagined they were metamorphoſed into ducks, and conſequently threw themſelves into the river!

No. V.

(Vide Vol. II. p. 17.)

Power of the Imagination in altering the natural Operation of Medicines.

Pechlin relates the following very ſingular hiſtories concerning the powers of the imagination in altering the impreſſions of medicines.

" A ſtudent, of a phlegmatic habit, and not poſſeſſed of a great deal of mother wit, once applied to me for advice. He complained of loſs of appetite, obſtinate coſtiveneſs, and of being almoſt ſuffocated in the morning by

by glairy mucous. After I had relieved his bowels, by means of a glyſter, I ordered him fifteen grains of white vitriol with a little cream of tartar, in order to extricate the *pituitá* from his ſtomach. He followed my advice, but, by a prepoſterous conceit, perſuaded himſelf that the powder was intended as a ſweat; and, accordingly, after he had ſwallowed it, he covered himſelf all over with the bed-cloaths, and fell into a profuſe perſpiration. He then came to thank me, and tell me that the powder had been attended with the deſired ſucceſs. I no ſooner heard of a ſweat, than, full of wonder, I aſked him if he had taken any other remedy than the one I ordered him. He aſſured me he had not, but that he thought the powder which I preſcribed for him was to ſweat him; which effect he therefore expected, and which had been effectually accompliſhed. But I recollect another caſe, of the ſame kind, more remarkable than this. There was a ſtudent of my acquaintance, at Leyden, who either becauſe I was too young, or becauſe he wiſhed to ſave his money, did not conſult me, but took care of his own

health,

health. He had, probably, heard medical men aſſert, that purgatives were the beſt kinds of remedies, and that pills were the beſt form for giving them. As he had been told that FERNELIUS was an author of great reputation, he borrowed him of me. I ſent it to him. He looked in the index for the word pill, and as he imagined that all pills were purges, he took the firſt as the beſt. Theſe were the *pil. Cynogloſſi*, the doſe ℈*j* which he ſwallowed; and, after drinking two or three glaſſes of warm beer, waited the effect: and lo! it took place agreeably to the imagination; and he was thus purged by opium, hyoſciamus, crocus, and other anodynes and aſtringents. Lib. 3. Obſ. xiii.

Force of Imagination.

THE three following caſes are brought forward ſolely with the view of ſhewing how the judgment yields, and how the body is affected by repreſentations when they are of a certain degree of ſtrength. It would have been a very

very eaſy matter to have introduced a great number of ſuch caſes, for they are by no means uncommon, but no new light would have ariſen from this; and thoſe which are here adduced are, therefore, ſuppoſed to be ſufficient for explaining the fact.

A youth was tempted, one day in Spring, to bathe himſelf in freſh water, juſt about the period when the frogs begin to ſpawn. He dived ſeveral times, and, on coming out of the water, obſerved the ſpawn of the frogs. He immediately imagined he muſt have ſwallowed ſome of it; and this idea made ſo ſtrong an impreſſion on his mind, that he afterwards believed young frogs were generated in his ſtomach and inteſtines, which lived on the meat and drink he ſwallowed. Some years afterwards he began to ſtudy medicine, probably with the view of curing himſelf. He proſecuted his ſtudies with aſſiduity for ſeven years; and after having travelled through Germany, Italy, and Switzerland, he obtained his degrees with much applauſe. Many were the remedies he tried to kill and expell his imaginary

nary frogs; and, wherever he went, he consulted the first physicians of the place on his case.

On his return from Italy, in the year 1609, he committed his health to my care. I endeavoured to convince him that his complaint was mere flatulency, and that the sudden propulsion of the wind, from one part of the intestines to the other, occasioned the noise. He argued strongly against this opinion, and tried to persuade me that it was not wind, but the voice of real frogs which he heard. He argued himself into a great passion in my presence, and asked me if I did not hear the frogs croak? He contended, also, that the presence of the frog was demonstrated by its movements in the stomach; for when it was hungry it moved and jumped about, and was never still until it was fed. I thought of giving him a purge, and of causing a live frog to be put into the close stool, in order to free him from his conceit. But, as he was well acquainted with medicine, he was full as cunning as myself.

He

He requeſted I would order him ſuch remedies as were efficacious in killing inſects, worms, ſerpents and toads. But, although I obeyed his requeſt in this, and gave him ſuch remedies for upwards of a quarter of a year, no frog appeared. I was at laſt tired, and told him his error in as ſtrong language as I could; endeavouring to convince him, by argument, that if a frog had got into his ſtomach it could not live. He began, at laſt, to be convinced of the error he was in, and thanked me for my pains.

PLATERI, *Obs*. lib. i. p. 43.

It is aſſerted by LUCIAN, that when ARCH - LAUS, a celebrated Greek actor, performed the part of Andromeda, in a tragedy of Euripides, ſeveral of the ſpectators (Abderites) were ſeized with delirium; ſome at the time of performance, others a day or two afterwards. During this delirium, they did nothing but declaim in a theatrical manner, and greatly lamented the fate of Andromeda.—

Van Swieten *in Boerhaave Comment.* tom. ii. p. 592.

That ſuch an effect might be produced on a people, whoſe imagination ſo greatly ſurpaſſed their judgment as that of the Abderites, is not unlikely. They are reported to have been a people of weak mind, and extremely ſuperſtitious. I have ſeen inſtances, ſeveral times, in this country, of ladies being carried out of the theatre in an hyſterical delirium, when Mrs. Siddons has played Iſabella.

VI.

(Vide Vol. II. p. 45.)

In Butler's Lives of the Saints, Vol. for the month of October, there is a full account of *Sancta Tereſa*; but which, from being unneceſſarily prolix, is too long to be inſerted here.

The following one I have copied from my friend Mr. Townsend's Tour through Spain, Vol.

Vol. 2. p. 100. It is extracted from BUTLER's Work, and is done with ſpirit and judgment.

" The life of S. TERESA, lately publiſhed among thoſe of other ſaints, by the Rev. A. BUTLER, is peculiarly intereſting. Her frame was naturally delicate, her imagination lively, and her mind, incapable of being fixed by trivial objects, turned with avidity to thoſe which religion offered, the moment they were preſented to her view. But unfortunately meeting with the writings of ST. JEROM, ſhe became enamoured of the monaſtic life, and quitting the line for which nature deſigned her, ſhe renounced the moſt endearing ties, and bound herſelf by the irrevocable vow. Deep melancholy then ſeized on her, and increaſed to ſuch a degree, that for many days ſhe lay both motionleſs and ſenſeleſs, like one who is in a trance. Her tender frame, thus ſhaken, prepared her for extaſies and viſions, ſuch as it might appear invidious to repeat, were they not related by herſelf, and by her greateſt admirers. She tells us, that in the fervour of her devotion, ſhe not only became inſenſi-

insensible to every thing around her, but that her body was often lifted up from the earth, although she endeavoured to resist the motion; and Bishop YEPEZ relates in particular, that when she was going to receive the eucharist at Avila, she was raised in a rapture higher than the grate, through which, as is usual in nunneries, it was presented to her. She often heard the voice of God when she was recovered from a trance, but sometimes the devil, by imitation, endeavoured to deceive her; yet she was always able to detect the fraud. She frequently saw St. PETER and St. PAUL standing on her left hand, whilst our Lord presented himself before her eyes in such a manner, that it was impossible for her to think it was the devil; yet, in obedience to the church, and by the advice of her confessor, she insulted the vision, as she had been used to do the evil spirits, by crossing herself, and making signs of scorn. Once, when she held in her hand the cross which was at the end of her beads, our Lord took it from her, and when he restored it, she saw it composed of four large gems incomparably more precious than diamonds.

monds. Thefe had his five wounds engraved upon them after a moft curious manner; and he told her that fhe fhould always fee that fame appearance: and fo fhe did; for from that time fhe no longer faw the matter of which the crofs was made, but only thefe precious ftones, although no one faw them but herfelf. Whenever devils appeared to her in hideous forms, fhe foon made them keep their diftance by fprinkling the ground with holy water. She had often the happinefs of feeing fouls freed from purgatory, and carried up to heaven; but fhe never faw more than three which efcaped the purifying flame, and thefe were F. PETER of ALCANTARA, F. IVAGNEZ, and a Carmelite friar.

" It is acknowledged, that many of her friends, diftinguifhed for their good fenfe and piety, after examination, were of opinion, that fhe was deluded by the devil; yet fuch was the complexion of the times, that fhe was at laft univerfally regarded as a faint. She had indeed every thing needful to conciliate

the good opinion of her friends, and the admiration of the multitude. The gracefulneſs and dignity of her appearance, the ſoftneſs of her manners, and the lovelineſs of her diſpoſition, the quickneſs of her wit, the ſtrength of her underſtanding, and the fire of her imagination, all her natural accompliſhments receiving luſtre from her exalted piety and zeal, from the ſanctity of her life, and the ſeverity of her diſcipline, all conſpired to eſtabliſh her reputation, as one that had immediate intercourſe with heaven.

"It is curious, yet moſt humiliating, to ſee a perſon of this deſcription, amiable and reſpectable as St. Teresa, deceived, and, with the beſt intentions, deceiving others. In this inſtance, we can readily account for the deluſion from the delicacy and weakneſs of her frame, the ſtrength of a diſturbed imagination, and the prevalence of ſuperſtition. But when we ſee men of the fineſt underſtandings, in perfect health, of different and diſtant nations,

tions, in all ages, treading upon the ſame inchanted ground, we can only wonder; for who can give any rational account of the aberrations of our reaſon?"

FINIS.

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	p. 224.	l. 8.	— produce	—	produces.
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	p. 443.	l. 11.	— hyoſcyanus	—	hyoſcyamus.
		l. 12.	— maculatium	—	maculatum.
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7 Parker's Old Testament, illustrated
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